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The Use of Paying Patients in Clinical Research and Teaching

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When the University of Chicago Clinics were opened in 1927, it was hoped that eventually they could be operated with a completely full time faculty practicing on wholly free patients only. Fortunately, the latter was never achieved. For one contribution this school has made to medical education is the demonstration that paying patients can be used routinely in clinical research and teaching. Furthermore, this has proved to have several advantages over the traditional practice of routinely using free patients only.

Because it is possible that there will be very few free patients if any universal health insurance scheme is put into effect, it is believed that this communication of the experience at Chicago will be of interest to other medical schools. Even if such federal legislation is never enacted, the advantages to the paying patient, the medical student and to the faculty member may well warrant serious consideration of this plan in other institutions. It should be emphasized that a full time faculty is not an essential prerequisite for greatly expanding the use of paying patients in other institutions. We at Chicago believe that "full time" offers some advantages too, but that it is not the essence of the suggested change in practice.

WHAT THE PROCEDURE IS

Junior medical students are assigned to hospital patients through a central office supervised by the appropriate resident. Senior students are assigned to outpatients by the appropriate clinic secretary. (Incidentally, this order of assignment of students to patients has much to recommend it since it permits the student beginning his clinical work to take his time, to re-examine the patient and to read about the condition before presenting the patient to the instructor.) Both groups take complete histories and perform complete physical examinations. The clerks in the hospital are also responsible for the routine blood and urine analyses.

From the very beginning all but a few patients who entered the hospital or outpatient department have had medical students assigned to them. The exceptions, though small in number, have interesting connotations. Until re-

cently, patients on the employees' health service were not so used. Now the medical resident decides whether the medical condition of such a patient is of sufficient teaching interest to warrant the assignment of a student. Rarely patients other than employees are not assigned for diverse reasons. Well over 95 per cent of all patients in medicine, surgery and pediatrics are worked up by students.

These departments started *de novo* in new hospitals built for them. Obstetrics and gynecology were housed in a new building built for an older institution: the Chicago Lying-In Hospital. This department still has a courtesy staff in addition to its full time members. Partly because of tradition and partly because of the nature of the specialty, private patients are not assigned to students in the Lying-In Hospital. There is an honest difference of opinion about this in the medical faculty. Most men in other specialties believe that these patients could be used with very little difficulty and some real advantage to all concerned.

WHAT ARE THE ADVANTAGES?

In general terms, the patient gains because of the improvement in the quality of medical care which he receives under this system. This improvement is chiefly brought about by the stimulus given the attending physician by the necessity for checking the student. A spirit of friendly competition has been created in which atmosphere the student, intern, assistant resident and staff member vie with one another to catch sins of omission or commission. Obviously, this attitude requires that common sense be used at the bedside and that all members of the professional team observe the amenities there.

Occasionally the improvement in the patient's care is brought about by the thoroughness of the student's history and physical examination which usually exceeds that of the intern. The very existence of a good medical record helps in the patient's subsequent care. I am well aware that my patients seen by students generally fare better than those I see without benefit of formal registration in the clinic with sketchy notes and incomplete examinations.

The medical student gains because paying patients are, by and large, more intelligent and literate in giving a history, more cooperative in following through special tests and procedures, more like the patients who will ultimately form the bulk of his practice. In short, he learns more quickly the elements of the science and art of medicine.

The faculty member gains because he is devoting more of his time to teaching and research. His professional development, therefore, should be faster. There are minor other gains. For instance, although unpremeditated clinical research of a statistical nature is frequently poor in quality, it is sometimes possible to establish a point, previously overlooked, by referring to well kept, complete records.

The teaching hospital gains because nearly all of its facilities are being used for the primary purpose for which they were intended. It can accomplish a comparable job with fewer beds.

WHAT ARE THE DISADVANTAGES?

There is the possibility that the inexperienced student will say something harmful to the patient. This very rarely happens if the students have been well selected and cautioned about it early in their clinical courses. In actual practice, a more frequent occurrence is the establishment of such confidence in the mind of the patient by the thorough student examination that the patient places his word over that of the attending physician. A few private patients have refused operations until the externe said they were necessary. There is also the possibility that the multiplicity of examinations will wear the patient out. This practically never happens to patients regularly assigned to junior and senior students. It does occasionally happen to a patient with a unique heart murmur during that period of the year when instruction in physical diagnosis is being given to large groups of sophomores. This can be prevented, as it should be in the case of the free patient.

The medical student does not see as much neglected, far advanced pathology or as many of the deficiency diseases. These faults can be partly corrected by the provision of a limited number of free beds.

Unless a certain number of free beds are provided, long term clinical research in the hospital is made impossible.

It was feared that the frank use of paying patients would lead to the hospital's reputation becoming one of a place where patients were "guinea pigs." To a certain extent this has happened, but it is far outweighed by the development of a reputation for good medical care. This results in a self selection of patients who represent more cooperative teaching and investigative material.

SUMMARY AND CONCLUSIONS

For nineteen years, nearly all of the full-pay private patients at the University of Chicago Clinics have been used for clinical research and the teaching of medical students. Very few of these patients have ever complained about this and many have expressed approval of the practice.

The advantages to patients, students, faculty members and to the institution far outweigh the largely theoretical disadvantages. Whether or not compulsory health insurance is established, an expansion of the use of private patients in teaching institutions has much to recommend it.

The National Institute for Medical Research

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The National Institute for Medical Research is the central research establishment of the Medical Research Council. It is concerned entirely with laboratory research, the clinical research activities of the Council being carried out by the maintenance of units in various hospitals and by the support of individual workers.

The Institute is now housed in a building in London, originally a hospital, which was acquired by the Council in 1914 and opened for its present purpose in 1920. From time to time since that date, additions to the original building have been made which have greatly increased the facilities for scientific work; among these is a large and well equipped animal house. Also in the organization of the National Institute are additional laboratories and a breeding establishment for small animals situated on land owned by the Council at Mill Hill, which is about five miles out of London.

The present staff of the Institute consists of about forty qualified research workers, together with about twice that number of technical assistants; there is also a full maintenance staff. Most of the scientific staff hold permanent appointments, but there are a small number of persons who are appointed for a short term of years only and, in peace time, usually some visiting workers from other laboratories in the United Kingdom or from abroad.

The range of work covered in the Institute is exceedingly wide; no subject having actual or potential bearing on medical science is excluded. Thus, it may happen from time to time that workers may be engaged in problems which are purely chemical, in preparation for a long term investigation of some aspect of chemotherapy; the proper study of a virus may require the application of modern physical technique, and for such application to be effective the technique itself may need special development; at the other extreme purely zoological work may have to be done, for instance, in connection with endocrinological problems. On the other hand, projects with immediately practical objectives, such as the development of immunizing vaccines, or the exploitation of a series of chemical compounds possessing a definite chemotherapeutic activity, are constantly proceeding.

In view of the wide range of work which is covered and the interdependence of the various activities, the organization of the Institute is kept as flexible as may be, rigid division into departments being avoided so far as possible. Nevertheless, the general research effort falls naturally into certain broad categories and these are physiology, pathology, chemotherapy, biochemistry, endocrinology and physics in its application to biological research.

In all these fields it is possible to claim that fundamental advances have been made during the twenty-five years of the Institute's activity. Although

this is not the occasion for a detailed review of the past work of the Institute, it is worth while to recall some of the more outstanding achievements. The physiological work has been chiefly associated with the name of the first Director of the Institute, Sir Henry Dale, and ranges from his studies of anaphylaxis to the extensive work on the chemical transmission of nervous impulses which gained him the Nobel Prize in Medicine in 1936. In pathology, the principal advances which have been made have been concerned with pathogenic viruses; such achievements may be recalled as the identification of dog distemper as a virus disease and the discovery of a method for its prevention, and the isolation of the influenza virus; nor must we forget the renewed interest in infective agents as a basis of malignant tumors in general, and of transmissible tumors which formed part of the general program of virus research.

Many contributions to the chemotherapy of trypanosomiasis and malaria have come from H. King and the group of workers associated with him; the recent discovery of the trypanocidal action of long-chain amidines which led to the development elsewhere of stilbamidine, an effective agent against kala-azar (sleeping-sickness) is worthy of special mention. A purely chemical advance was represented by the theoretical contribution of King and Rosenheim which led to a fundamental clarification of the problem of the structure of steroids, a group of substances which embraces bile acids, sex hormones and heart drugs.

The biochemical work which has been done in the Institute includes the extensive investigations of the late H. W. Dudley on the posterior pituitary, on insulin, on spermine and various substances and on the mammalian body tissues. The isolation of calciferol and the proof that it was responsible for a cure for rickets were also carried out by a team of workers in the Institute.

The division of endocrinology under A. S. Parkes has come to be recognized as an important center of research particularly on problems of the physiology of the sex hormones.

On the physical side, optical work has been a major activity. Ultraviolet microscopy, in particular, has been studied. The present high state of development of this technique, which has proved to be of great value for biological work, is largely due to the efforts of J. E. Barnard.

Another activity of the Institute stands somewhat apart from its research program; this is concerned with biological standards. The potency of many substances in use for medical purposes can only be determined by biological assay. In order that such assay shall be on a secure basis, it is essential that it be carried out in comparison with a standard preparation of the substance under test. One of the services rendered by the Health Organization of the League of Nations has been the establishment and supply, on an international basis, of the standard preparations which are required. Much work has been done on this project at the Institute which throughout has been the center for the maintenance of international standards for the arsphenamines, the vitamins, the hormones and heart drugs. After the German occupation of Denmark in 1940, the Institute, at the request of the League of Nations, assumed the further

responsibility for the supply of standards for antitoxins and tuberculin which had formerly been maintained at Copenhagen. In addition to their international application the standards are used as reference substances in the operation of the Therapeutic Substances Act in this country. In the fulfillment of the obligations of the Medical Research Council under this Act technical questions arise in which many members of the Institute staff have their part to play.

In spite of abnormal conditions during the last five years, the activity of the Institute has been maintained fully. There has, however, inevitably been a re-orientation of the effort of the staff. Fundamental investigations have temporarily receded into the background and a large amount of work has been carried out on problems of immediate importance to the war. Thus the physiologists have been occupied with matters affecting the safety and efficiency of fighting men in the three services. The pathologists have directed their attention almost entirely to diseases which have acquired special importance during the war. Even endocrinology has found its applications to the special circumstances of the time.

Now the Institute stands on the threshold of new developments. Resumption of the fundamental researches which are the proper activity of the staff becomes possible and considerable extensions may be envisaged for the time when we occupy the new building, with its larger space and greater facilities. Completed after the beginning of the war, the building has been lent to another department for the last three years. As soon as it can be made available to the Council again, the installment of the final equipment of this building will be undertaken. It is planned to carry on research of the same general character as has been described, but efforts in certain directions, particularly in all aspects of chemotherapy, will be extended and intensified. With the improved facilities and modern equipment which will be available it may be anticipated with some confidence that the Institute will continue to play, as it has in the past, an important part in fundamental medical research.

A Method of Displaying Anatomical Pictures

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Visual education is playing a larger part in the training of the medical student than heretofore. The motion picture, for example, has been accepted as a valuable aid to the teaching of surgery and obstetrics, while the Kodachrome (2 x 2 in.) miniature slides promise to be of great value to every branch of medicine and dentistry. Nevertheless, these are expensive aids, with the common disadvantage of requiring some form of projector or viewing box.

In the past many anatomy departments, especially in the larger schools, have used large charts or diagrams. These, too, had their disadvantages. Expensive to prepare and maintain, they were difficult to store, and could not be studied by the student whenever he wished.

A method, well suited to the smaller medical school with classes averaging 50 or 60 students, has been developed in this department. Started about a dozen years ago by Dr. Mainland, it overcomes most of the above mentioned objections in that the pictures used are inexpensively prepared, easily stored and always available to the student. Moreover, they are of equal value in the lecture or dissecting room.

The pictures are culled from old and new textbooks, journals, atlases, and even advertisements. They are chosen (1) to illustrate points mentioned in the departmental textbook,¹ and supplement its pictures, (2) to introduce the student to Spalteholz and other standard works, and (3) to acquaint the student with original work. The source of a picture is always mentioned during discussion. All pictures also bear a number and code letter for ready reference in laboratory instructions. Mounted on thick white drawing paper, pasted on thin 10 x 11 in. sheets of cardboard, the illustrations are protected by cleaned X-ray film, or transparent Pyralin sheeting, stapled along the edges. Blue daylight film prevents fading of colors, or yellowing of the mount. Two punch holes, set 10 inches apart and fitted with eyelets, complete the preparation. The pictures are then ready for use in the lecture room epidiascope, or can be hung in the laboratory or adjacent halls as the occasion demands.

In the halls of this department four strips of $\frac{3}{4}$ x $2\frac{1}{2}$ in. wood, set eight or nine inches apart, have been arranged horizontally along the walls, with the topmost strip seven feet from the floor. Four rows of pictures, supported by angled hooks screwed into the wooden strips, are thus stored and presented for study at any time. The halls can now accommodate about 840 pictures. Grouped appropriately they cover well nigh every aspect of anatomy: history, heredity, embryology, histology, anthropology, as well as general, regional, applied and radiological anatomy. At appropriate times, the pictures are unhooked and used for lecture demonstrations, or else placed in the dissecting room so that they may be consulted during the laboratory hours.

To save space in the dissecting room, the pictures are displayed on a special device in front of the wall blackboard, instead of on the cumbersome rotary stands used in some departments. A broad, 12 inch wooden board has been set horizontally above the upper edge of the wall blackboard, so as to overhang it. This board, which is fixed by metal brackets to the wall above the blackboard, carries four tracks of Harrison curtain rail with rollers, from each of which is suspended a Masonite board. Each of the four Masonite boards is $\frac{3}{8}$ in. thick, and 4 feet square, and is fitted with hooks so that it will hold twelve (10 x 11 in.) pictures. Forty-eight pictures are thus available during a laboratory period.

During a blackboard demonstration, the four Masonite picture boards are slid to the end of the track, the boards sliding one behind the other. After using the blackboard, the instructor can slide along one or more of the picture boards and draw attention to the picture series. During the laboratory period, the students slide the picture boards to and fro according to whether they wish to consult the pictures or copy chalk work on the blackboard.

Four pieces of curtain track or rail, each 16 feet long, will allow all four of the Masonite boards to be exposed at once, if they are 4 feet square. More boards may be used. This may be done by either using more pieces of track and, consequently, a wider supporting board on which to screw them, or longer track with a set of Masonite boards at each end. Care must be taken, however, to set the Harrison rail about three inches apart so that the boards do not catch on each other while being slid past one another. The Masonite boards are fixed to the track rollers by wire loops, and move more smoothly if the rollers are oiled periodically. If the boards are backed with thin laths of wood, their picture supporting hooks are not so liable to unscrew or be torn out.

Harrison curtain rail is a brass roller track, originally manufactured in England. Huntland curtain rail is similar. An aluminum type, which is more malleable, is now available.

SUMMARY

1. An inexpensive method of building up a teaching collection of anatomical pictures is presented, together with particulars of how it is used and stored.
2. A space saving device for their display in the laboratory is also described; it consists of Masonite boards slung from Harrison curtain rail, and dispenses with the cumbersome rotary stands used in some departments.

LITERATURE

1. MAINLAND, D.: *Anatomy as a Basis for Medical and Dental Practice*. 1945. Paul B. Hoeber, Inc., New York.

Undergraduate Education in Allergy

Report of the Subcommittee on Undergraduate Education in Allergy of The American Academy of Allergy*

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Clinical allergy has been the step-child of undergraduate medical education long enough. The Subcommittee on Undergraduate Education in Allergy,† on behalf of that step child, offers the following brief which has as its goal the uniform and wholehearted invitation of clinical allergy into the undivided family of the medical curriculum.

Last year, Dr. David P. Barr addressed the first annual meeting of the American Academy of Allergy. It is not in my pen nor tongue to provide more searching and convincing arguments for the uniform and adequate adoption of allergy by our medical schools than the following quotations from his address:‡

"It is more than deplorable that many young internists have been permitted to finish their training almost without contact with allergy and allergic thought. Some of them have been so crassly ignorant as to regard the whole specialty as a somewhat unnecessary and undesirable field.

"Certainly the concept of altered reaction to bacterial and nonbacterial substances is one of the most important ideas of medicine today. It ranks with psychosomatic medicine, with the study of the circulatory apparatus, with bacteriology, with metabolism and with clinical chemistry. It is relevant to the pathogenesis and affects the practical management of much more than one-half of all the diseases to which flesh is heir. It is part and parcel of internal medicine and no internist can be regarded as completely trained who is not thoroughly cognizant of the principles of sensitivity, of anaphylaxis and of the altered reaction of the body to proteins. On the other hand, no allergist can do justice to his patients or to his specialty who is not fundamentally trained in internal medicine to the extent that he uses habitually a comprehensive history, performs routinely a complete and searching examination, and is aware of related circulatory, respiratory, metabolic, and psychosomatic problems. Everywhere the practice of allergy impinges on other fields of medicine. In consideration of asthma one must take into account emphysema, bronchitis, the state of the circulation, and the state of the kidneys, as well as the constitution and psychological state of the patient. In dealing with hay fever, the allergist must be well acquainted with the problems of nasal infection, of sinusitis, and of other diseases of the upper respiratory tract. In considering the erythema group he must be aware of a great number of diseases of the skin with which the members of this group may be confused. In the more recent extensions of drug allergy he must be aware of many of the problems of the chemistry, pharma-

* Prepared as the President's Address for the second annual meeting of the American Academy of Allergy held in Chicago, December 10-11, 1948.

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cology, and clinical use of drugs. Tobacco allergy and the recently emphasized blood vessel allergy involve the field of peripheral vascular disease as well as acute rheumatic fever, periarteritis nodosa, and that strange group of conditions now sometimes collected under the name of angitis.

"As in any other training in medicine the sound education of an allergist will depend upon the accumulation of large experience under expert guidance. It is high time that departments of medicine recognize the need of such facilities and organize them in such a way as to permit systematic and enlightened training. The pressure which is now being exerted by the American Academy of Allergy and by other organizations interested in allergy must be met by equal efforts on the part of educational institutions.

"It is only through training of the highest type that the extraordinarily important principles of allergy can be properly exploited, or that the practice of allergy can be made worthy of the subject. The allergist of the future should be the internist who, in addition to his sound clinical accomplishments, has acquired deep and fundamental knowledge of immunology. He should be the consultant whose advice will be sought in connection with immunologic problems whether they concern infectious or noninfectious disease. He should be the internist who possesses those special skills necessary for the recognition of sensitization and the detection of its cause. Last, it will be to him that we must look for research and for significant contributions to the great field of immunology in medicine."

In recognition of the need for proper dissemination of knowledge of clinical allergy, the American Academy of Allergy established a Committee on Education at its first meeting. Subcommittees for the promotion of better postgraduate, graduate and undergraduate instruction were formed. The spheres of activities of the subcommittees for graduate and postgraduate instruction are abnormally broad because they must first teach the fundamentals of clinical allergy to that large percentage of practicing physicians who were not, but should have been, taught them in medical school. To prevent the perpetuation of this error, it must be corrected at its source. Accordingly, the Subcommittee on Undergraduate Education assumed its first task to be to arrange for the inclusion of adequate instruction in allergy in the curriculum of every American medical school. Previous surveys³ had shown that this task was not a simple one.

A brief review of the history of clinical allergy indicated that its progress had been unexpectedly swift and sound. The first two allergy societies, parents of the American Academy of Allergy, were formed in 1923, just 13 years after Meltzer's stimulating comparison of asthma with anaphylaxis. From the members of these societies has come a wealth of clinical and experimental contributions. The variety, comprehension and usefulness of these contributions is astounding when one realizes that they were the result of the determination, insight and skill of rugged individuals. Many of the important additions to our knowledge of allergy were the result of the efforts of allergists who did not have access to funds nor facilities usually available for medical research.

The riddles of allergy are too deep to continue to depend on the resources of the individual. The need is great to bring these riddles into several horizons: first, of our brilliant young medical students; second, of the experienced in-

investigators in chemistry, physiology, pathology, pharmacology, immunology and anatomy in medical schools; and third, into the horizons of the great foundations which support and guide so generously and wisely the probings into the mysteries of cancer, tuberculosis, cardiovascular diseases, psychosomatic and other disorders. The victims of allergy constitute roughly 10 per cent of our population. It is difficult to understand the discrimination which continues to deprive these victims of the benefits which would accrue from wholehearted acceptance of the problems of allergy by medical schools.

Evidence that allergy victims are neglected by those schools which do not have allergy clinics nor proper instruction in allergy is apparent in the number of allergy patients who attend available clinics. In 1935 a survey³ was made of 13 clinics which had a combined registration of more than 120,000 new patients and more than 950,000 visits. It was found that 2.2 per cent of all new, 8.0 per cent of nonsurgical, and 4.0 per cent of the total outpatient visits were to the allergy clinics. We have been told recently that approximately 5 per cent of all outpatients' visits to the Massachusetts General Hospital were to the allergy clinic.

The Subcommittee on Undergraduate Education has approached its task by recommending a minimal allergy curriculum and by a survey of the status of instruction in allergy in our medical schools. This part of the work is done and is reported here in some detail.

Recommendations for the minimal allergy curriculum are:

- I. Instruction in Allergy should be sufficient to give each student a reasonable knowledge of:
 - Anaphylaxis
 - Pathological physiology of allergy
 - The clinical recognition of the various manifestations of allergy
 - The etiological diagnosis of allergy
 - (1) History taking (2) Skin testing (3) Elimination procedures
 - (4) Allergens and allergen sources
 - Treatment of allergic diseases
 - (1) Symptomatic (2) Avoidance of allergens (3) Desensitization and immunization
- II. Each student should have at least 12, preferably more, hours of instruction in these topics.
- III. The division of these hours among the departments of immunology, allergy division of internal medicine, dermatology and pediatrics should be left to the curriculum committees of the schools.
- IV. The method of instruction (didactic, case demonstration, clinics, etc.) should conform to current practices at the individual schools.
- V. Instruction in allergy should be done by men whose chief interest is in allergy.
- VI. An Allergy Clinic is a prerequisite to good instruction in allergy.
- VII. Elective courses should be available for those students who wish to emphasize allergy.

The survey of the status of instruction in allergy was done by a series of questionnaires. It is fitting to acknowledge here the cheerful cooperation of those who took time, they could ill afford, to answer them.

Replies to the questionnaires are summarized in table 1.

Table 2 contains the replies of each school to the four important questions: (1) Do you have an allergy clinic? (2) Are all of your students instructed in allergy by allergists? (3) Does your instruction in allergy include the topics recommended? (4) Does each student have at least 12 hours of instruction in allergy?

TABLE 1.—UNDERGRADUATE INSTRUCTION IN ALLERGY QUESTIONNAIRE.

Questions	Answers		
	Yes	No	No Reply
1. Is there an Allergy Clinic?	57	9	—
2. Is the Clinic used for teaching?.....	50	6	10
3. Do all students rotate through it?.....	27	23	16
4. Is it elective?	21	24	21
5. Has the clinic been approved by the Advisory Board of Allergists?	23	28	15
6. Do all students have didactic instruction in Allergy?.....	55	6	5
7. Is clinical instruction in Allergy by Allergists?.....	47	19	—
8. Is there an elective course for more detailed study of the allergic diseases?	12	38	16
9. Had instruction in Allergy increased in the five years preceding the war?	36	25	5
10. Is the budget for the work in Allergy equal to that for Cardiology or Dermatology?	15 (No budget—10)	23	18
11. Does the school provide funds for research in Allergy?.....	18	42	6
12. For research in other specialties?	36	14	16
13. Do you have plans for increased undergraduate instruction in Allergy after the war?	27	26	13
14. Is there a Department of Allergy?	6	54	6
15. Does your school conform to allergy curriculum recommendations of the committee?	44	22	—
16. Are each of your students given at least 12 hours of instruction in Allergy?	31	35	—
17. Is it a subdivision of another Department? In at least 52 schools it is a subdivision of Internal Medicine. In 3 schools it is under Immunology, Dermatology, Pediatrics, respectively.			

It will be seen that 31 schools seem to have an acceptable minimal curriculum. Twelve schools offer little or no organized instruction in allergy. In 14 schools instruction is obviously inadequate. Nine schools have minor deficiencies. Adequate instruction is not likely where there is no allergy clinic, where students are not instructed by allergists, where the basic topics of allergy are not taught, nor where allergy is taught significantly less than 12 hours.

What has been done is only a beginning of what must be done before allergy is properly taught in all medical schools. The most important immediate goal is to aid and encourage the institution of a minimal satisfactory curriculum in those schools which have inadequate or no organized instruction in allergy.

There are good and varied reasons in each of these schools for failure to provide adequate instruction in allergy. A few obvious reasons are lack of clinic,

TABLE 2.—SURVEY OF UNDERGRADUATE INSTRUCTION IN ALLERGY IN UNITED STATES.

SCHOOL	Is There an Allergy Clinic?	Are All Students Taught by Allergists?	Does Teaching Conform to Outline?	Is Each Student Taught Allergy 12 Hours?
Albany M. Coll.*	Yes	Yes	Yes	Yes
Arkansas*	Yes	Yes	Yes	Yes
Baylor†	No	Yes	Yes	No
Boston‡	Yes	Yes	No	No
Buffalo‡	Yes	Yes	No	No
California*	Yes	Yes	Yes	Yes
So. California*	Yes	Yes	Yes	Yes
Chicago*	Yes	Yes	Yes	Yes
Cincinnati‡	Yes	No	No	No
Colorado‡	Yes	No	Yes	Yes
Columbia‡	Yes	No	No	No
Cornell*	Yes	Yes	Yes	Yes
Creighton†	Yes	Yes	Yes	No
Duke*	Yes	Yes	Yes	Yes
Emory‡	No	No	No	No
Coll. Med. Evang.*	Yes	Yes	Yes	Yes
Georgetown‡	Yes	No	Yes	No
George Washington‡	No	No	No	No
Georgia‡	No	No	No	No
Hahnemann M. Coll.*	Yes	Yes	Yes	Yes
Harvard‡	Yes	No	Yes	No
Howard*	Yes	Yes	Yes	Yes
Illinois*	Yes	Yes	Yes	Yes
Indiana‡	No	No	No	No
Iowa‡	No	No	No	No
Jefferson M. Coll.†	Yes	Yes	No	No
Johns Hopkins‡	Yes	No	No	No
Kansas‡	Yes	No	No	Yes
Long Island Coll. Med.†	Yes	Yes	Yes	No
Louisville*	Yes	Yes	Yes	Yes
Louisiana‡	Yes	Yes	Yes	Yes
Loyola*	Yes	Yes	Yes	Yes
Marquette*	Yes	Yes	Yes	Yes
Maryland†	Yes	Yes	Yes	No
Meharry M. Coll.‡	No	No	No	No
Michigan‡	Yes	Yes	No	No
Minnesota*	Yes	Yes	Yes	Yes
Nebraska†	Yes	Yes	Yes	No
New York M. Coll.*	Yes	Yes	Yes	Yes
New York U.‡	Yes	No	No	No
Northwestern*	Yes	Yes	Yes	Yes
Ohio*	Yes	Yes	Yes	Yes
Oklahoma†	Yes	Yes	Yes	No
Oregon†	Yes	No	Yes	Yes
Pennsylvania*	Yes	Yes	Yes	Yes
Pittsburgh*	Yes	Yes	Yes	Yes
Rochester*	Yes	Yes	Yes	Yes
St. Louis*	Yes	Yes	Yes	Yes
M. Coll. State of So. Carolina‡	No	No	No	No
Stanford‡	Yes	No	No	No
Syracuse*	Yes	Yes	Yes	Yes
Temple*	Yes	Yes	Yes	Yes
Tennessee‡	No Reply			
Texas‡	Yes	Yes	No	No
Tufts M. Coll.†	Yes	Yes	Yes	No
Tulane‡	Yes	Yes	No	No
Vanderbilt*	Yes	Yes	Yes	Yes
Vermont*	Yes	Yes	Yes	Yes
Virginia*	Yes	Yes	Yes	Yes
M. Coll. of Virginia*	Yes	Yes	Yes	Yes
Washington*	Yes	Yes	Yes	Yes
Wayne‡	Yes	No	No	No
Western Reserve*	Yes	Yes	Yes	Yes
Wisconsin*	Yes	Yes	Yes	Yes
Woman's M. Coll.†	Yes	Yes	No	No
Yale‡	Yes	Yes	No	No
	57	9	44	22
				36
				80

* Fulfills recommendations for minimum allergy curriculum.

† Minor deficiencies in allergy curriculum.

‡ Inadequate instruction in allergy.

§ Little or no organized instruction in allergy.

office and laboratory space; salaries for instructors, technicians and secretaries; money for syringes, needles, refrigerators and extracts. Or, there may not be a local enthusiast to introduce and champion allergy. Or, the inseparable relationship of allergy to the rest of the medical curriculum may have been overlooked. In some instances, there may be simple prejudice. In others, there may be honest opinions that instruction in allergy is undesirable. In spite of these difficulties it is felt that a good allergist with a well supported allergy clinic would soon find a logical way to present the gospel of allergy to his students without disturbing the framework of the curriculum already in use in his school.

Another goal of the Subcommittee on Undergraduate Education in allergy is to provide instructors in allergy with various teaching aids in the form of movies, slides and manuals for dieticians, patients and students.

The means for achieving these goals are now in the formative stage. It is to be hoped that they will develop and function successfully. Allies in our campaign will be sought in the Council on Medical Education and Hospitals of the American Medical Association, the Association of American Medical Colleges, and in the editors of regional and national medical journals. Our Education Committee holds itself at the disposal of the curriculum committees of any of our schools.

The Subcommittee on Undergraduate Education will not consider its work done until allergy is taught well in all schools and until the challenge of the riddles of allergy has been accepted by trained investigators in the basic sciences and by the great foundations which support and guide medical research and instruction. Until then the Subcommittee will continue to champion allergy, the step-child of medical education.

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Has Alpha Omega Alpha a Function?*

CHARLES D. ARING

THE PRIVILEGES OF ALPHA OMEGA ALPHA

It is fitting to reward excellence, but it is my belief that those who have received the key of this fraternity were not stimulated to learning because of it. They were in overwhelming numbers the best by any measure and were not lifted into that category by the possibility of decoration. In adulthood I suppose excellence is akin to bravery; by the time the field of action is reached one either has the capacity to be intelligent or brave or he does not, and decorating does not engender it.

I am happy to have had the all too brief contacts with the novitiates that our student-teacher relationship allowed. I would like to know you better, since if I did I might discern what it is that has set you at the pinnacle of your group. It is rather a pity that we have to spend so much time studying and working with what might be termed the subaverage to the practical exclusion of knowing well such people as you. I suspect that much could be learned if we had the time and ability to determine exactly what it is that makes very fine people tick.

In your undergraduate years you have furnished the principal reason why some men continue to teach. How grateful it would be to instruct a class composed of persons of your calibre! Unquestionably the excellent student stimulates instruction and even compensates some teachers in a way that no accumulation of the world's goods could do. Though I am aware with the philosopher that "Old men are fond of giving good advice, being no longer able to set bad examples," one has along with commendation a few warnings for you.

Before admonishing, let me summarize the privileges of this order. You are a favored and well-considered group, with the distinct advantage of access to the storehouse of good, even great work. You have won the key to this treasure which could flavor your whole estate by reason of intellectual ability and emotional health. I am unwilling to be pushed beyond this bald statement concerning your perquisites—why you have won these privileges would take me down lanes where the evidence is limited.

HAS ALPHA OMEGA ALPHA A FUNCTION?

What are the duties of the membership in Alpha Omega Alpha? I shall pass by the individual duty of each of you to continue along the course which you have begun; to a consideration of the function of this organization.

As far as I know, which is not encompassing, Alpha Omega Alpha in most institutions has little activity besides the genteel and somewhat fatuous one of attempting to reward the good. Unquestionably, there must be some reward for diligence here and not postponed to the next world where privileges have

* Address at the Initiation Exercise of Alpha Omega Alpha, June 8, 1945. From the Department of Neurology, University of Cincinnati College of Medicine.

not been satisfactorily investigated. But I have stated my doubt that the fraternity has served as a stimulus to learning, as it perhaps may have been thought to do. In some schools Alpha Omega Alpha has brought an occasional orator or researcher to town and exhibited him to the student body.

I hope that it will not frighten some of you beyond stage 1 of delirium¹ to suggest that if Alpha Omega Alpha is synonymous with excellence of medical mind, then logically it might be considered whether or not one of its functions may be the betterment of medical teaching and all that it implies. Mind you, I am casting about in the attempt to make Alpha Omega Alpha functional.

I shall open the discussion of this topic by mentioning a recent conversation with one of our discerning, just-turned Senior students who asked that I write a recommendation required for his application for internship. I talked with him about thirty minutes as is my wont, to determine what he was thinking about and I gently led 'round to the topics of medical education, instructors, and grading. During our discussion he noted that it was not reasonable to ask instructors to evaluate members of his class for internship, since the former did not know them. His remark contained more than a little significance for me since on his entry to my office I had mistaken him for one of his classmates and had miscalled his name.

There is a lesson in this rather artless experience which, taken together with the repeated participation in oral examinations, suggests to me at least that the single greatest improvement in the evaluation of the individual student of medicine—a step toward the improvement of medical practice—would follow a natural and cordial acquaintance between student and teacher. This does not embrace intimacy, an incongruity in healthy teacher and student relationship. I would like to express the opinion that this defect in our associations is part and parcel of the deficiency of the doctor as a teacher.

Some of us have no interest in this matter and others perhaps feel that it makes little difference whether teaching is good, mediocre, or bad, the product is always the same. You will recall that I am holding a unilateral discussion with our nine least conservative members. I anticipated the more fixed gentlemen by addressing myself to those not yet taking sanctuary in age; whereby I feel reasonably certain of touching sympathetic chords.

While we all seem rightly anxious to protect the public from inefficient doctors, small means are ever suggested to protect the student from inefficient instructors. To my way of thinking the latter function is most peculiarly ours, it concerns us intimately, and to the exclusion of nonmedical groups, whereas the citizenry in our democracy should be able to be doctored by whomever they please, within the law.

That the M.D. degree does not confer on us the ability to teach has not been stressed enough. A respectable number of medical instructors are not teachers; though they pass as such they are unable to impart knowledge, not usually for the reason that they do not possess it themselves but because they are emo-

1. ROMANO, J., and ENGEL, G. L.: *Delirium*. Arch. Neurol. Psychiat., 51: 356-377, 1944.

tionally torn about the desire to teach among a host of other things. That they creakingly, and usually ill-humoredly, uncivilly, illiterately, and even unscientifically follow a certain pattern of instruction is not to be denied; however their undisciplined emotions render them relatively incapable of showing how.

There are many shields to protect the instructor; self preservation in each of the members of the guild presents a ponderous restraint to its improvement. There are teachers' unions to prevent encroachment on liberty; an obvious necessity with politicians around every corner. There would not seem to be much question that it would be wise to spread the guards to cover the student.

Perhaps to the slight of the student and toward the glory of the school and budget, teachers have been in the main those who have achieved in research. Now it is manifest that a career may be compounded of investigation and teaching; this marvelous blend has occurred just often enough to make us ever hopeful. But it is not a natural mixture, its frequency is considerably more apparent than real.

Faculty appointments in medical schools are much too dependent on publications. The factor next in importance is the requirement that one should not have rumbled too many feathers in the communal coop. For the moment let us phantasy that publication represents research which surely it does not. On these or on any terms faculty appointment is weighted heavily on research ability and lightly if at all on teaching ability. Having assumed rather the character of a routine it must somehow represent a bargain for medical schools. For the student I venture to surmise that it is a confounded nuisance and it may be something of a hazard to medical education and practice.

Yearly, hundreds of medical students swing into the orb of instructors devoid of the ability or even the desire to teach. Again for the purposes of this discussion let us assume that these faculty members represent an asset to their schools. Even so, it is possible that the debit side of the ledger is the heavier by reason of the defect in the disciplines of numerous students; in a system in which the future always retains greater value than the present.

Should improved teaching be an aim and a concern of Alpha Omega Alpha? It seems to me that one of the functions of excellence is never to cease improving. Of what other group in medicine may we say the same so hopefully? Should the matter be entirely the concern of faculty councils who may indicate to us that we are out of bounds? It may be redundant in this company to observe that we would not expect to find the intelligent physician treating members of his own family. Restricted vision is induced not infrequently by proximity to a problem.

In the Truman Committee, which was an enterprise of such quality that it elevated its Chairman to the highest office in the land, it was a theory that it was better to have fact-gathering done by someone who had no experience with the field under scrutiny; rather than by an expert with preconceived views. Later the experts could make their contribution. In a like manner teaching ability may be evaluated; its reasonable appraisal must precede improvement.

Elsewhere² I have outlined a method which would serve as a step in the revaluation of teaching ability. It was suggested that each member of the graduating class might be willing anonymously to assign a single grade without qualification to each and every instructor that he has met during his career in medical school. The graduating student would be urged to refrain from emotionalism as far as it is possible and to consider the instructor coolly from the standpoints of his content of information and his ability to dispense it, and to initiate trains of thought and action. A consideration would be the degree with which the student thought an instructor able to identify with him and his problems.

Under no circumstances would this system be considered to be punitive. It would represent the good will of the new physician toward his college, and would be indicative of his desire to improve it. Neither would there be free access to this data, which would be available to the Dean and faculty council should it be needed; certain safeguards should be established before such information be sent abroad.

It would seem likely that the judgment of the student selected for Alpha Omega Alpha might represent an even better standard of reference than that of the entire class. Whatever the case, Alpha Omega Alpha might consider whether as one of its functions of enlightenment, it might organize and introduce the assessment of medical school faculties since it is a group which could be accused of no worse motive than altruism.

Such confidential evaluation might serve faculty council in deliberations about promotion, discharge, discipline, etc. It would represent a firmer basis for consideration than the more subjective data that now permeate teaching institutions. I would feel especially gratified if my evaluation of a staff member in my own department or another were corroborated by that of the students and especially by those of Alpha Omega Alpha calibre; and I would welcome, privately, of course, the opportunity to improve my own teaching on the basis of such student opinion.

This confidential evaluation would serve another purpose. At present it is practically impossible to learn about the teaching ability of members of the faculty in schools other than one's own. This bogey always faces faculty council in filling Chairs; the publications of the candidate are available, particularly their quantity and titles, and one usually has some gauge of the esteem with which he is held among his fellows. But nowhere can one learn about his teaching ability unless as rarely occurs, someone on faculty council has sat under him. The availability of the students' estimate of teaching ability would be an invaluable asset to medical education in this country; certainly it would contain more truth than the usual letter of recommendation.

The proper use of such information possibly might avert the obvious dishonesty of the acceptance of a position ostensibly to teach, and then either drowsing or threshing about in a laboratory in the name of research. As an ex-

2. "Strictures on some of the defects and infirmities of intellectual and moral character in students of medicine." *J. A. Am. M. Coll.* 20:303-313 (Sept.) 1945.

pert in teaching" has put it "... a life of research is a worthy one, but no amount of worthy motive justify false pretenses and fraudulent impersonation—in this case the pretense of imparting knowledge and the impersonation of a teacher."

STORY OF ALPHA OMEGA ALPHA IN THE CLASS OF 1929

For the final portion of my presentation I shall take my text from Santayana: "He who cannot remember history is condemned to repeat it." Not that the record of a single class in a school of medicine should be dignified to the plane of history but past performance whatever it is termed is informative. The story of the Alpha Omega Alpha group in my class, which graduated from this school 16 years ago, points something of a lesson.

Twelve of a total of 66 students of the class of 1929 of the University of Cincinnati College of Medicine were accepted into Alpha Omega Alpha. One was admitted later by what I term, the posthumous route,—that is not because of class standing, but after it seemed reasonably certain that he would achieve. We shall discard him from our consideration since he is in a sense a foreign body.

Two of the remaining eleven are dead, and with Darwin we count them lost. Three have reached what may be safely referred to as national prominence in their fields; and two of these three are diplomates of specialty boards, as is a third person of the eleven. Two of eleven are relatively active in medical teaching. By the rough criteria that are available to us, we may estimate that about 30 per cent of this Alpha Omega Alpha group might be classed under the very vague heading, outstanding. By similar criteria only three of the other 55 members of the class may be rated similarly, a percentage of 5½. There can be no question that the Alpha Omega Alpha group of the class of 1929 is of the order of comparative excellence, and I would be willing to wager that so it will be found in almost any medical class.

The story of the class of 1929 may serve to indicate your future. You are of the order of excellence, but this does not assure your preeminence. I would surmise that your future is somewhat brighter than was ours, since medicine gradually becomes a happier and more enlightened profession. I am not on conjectural ground when I say that within a decade and a half your equipment and opportunities are considerably greater. There is reason for each of you to achieve. In a few years we confidently expect that you will tell us a happier story than I have related since such has been the history of medicine for many, many years, and no one anticipates that excellence will disregard history or mark time. At such a time even as now I would value your opinion as to whether or not Alpha Omega Alpha has a function.

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A Practitioner's Reaction to Trends in Medical Education

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Many articles have appeared recently with respect to imminent changes, suggested or demanded, in the education of the future doctor of medicine. That many of these suggestions, coming often from those who should know better, are actually dangerous must be admitted after careful analysis of these reports. One views with increasing concern much of this irrelevant and haphazard talk, and a discussion of this serious matter is timely.

There is no question that improvements can be made. But rarely can one find a definition of first or basic principles. Few have attempted an analysis of the purpose of medical training. What do we wish to achieve? F. M. R. Walshe¹ and Sir Thomas Lewis² have written on this problem, and one finds that their offerings are characterized by thought and singular penetration of present problems, and worthy of careful attention and several readings. Walshe has succinctly stated, "It is the fundamental defect of our teaching that we have not given the student a firm grasp of general principles; we have not taught him to weigh evidence; to discriminate or think logically, and we have too often failed to imbue him with that keen desire for understanding that is the essence of true education. We have been content to preoccupy him with feats of memorizing and with the acquisition of an increasing number of techniques." Anyone who doubts that such results prevail in this country need only look about him.

What are the more objective evidences of the defects in our training? To begin with, the language of medicine is woefully inaccurate and full of doubtful meanings, vague terminology, and outright errors perpetuated by those very men who discuss changes in the curriculum and who are responsible for the teaching of students. For example, the term "malignant degeneration" appears constantly. Whereas, the word "malignant" is open to serious criticism, certainly "malignant degeneration" has no place in our language, for a degenerative process is a retrogressive one in a pathological sense, and a tumor is hardly this. The tormented word "toxic" is another example of sloppy thinking, and is used to describe almost anything. It implies the presence in the body of a noxious substance marshalling its evil effects to the detriment of the soma. Except for a few well demonstrated instances in which such a substance is really present in the body, the word has no value and is, in fact, harmful to our concepts of disease, for its use clouds the issue; it helps us to forget our woeful ignorance with respect to those circumstances under which it is used.

There are few articles on the treatment of disease not prefaced with the statement, "The best treatment is prophylactic." Such a statement is nonsense. Prophylaxis means to prevent. One cannot treat something that has not occurred. This statement also puts the reader immediately on the defensive, for

it implies that if the doctor had not been such a fool the patient would not be in his predicament.

It is common enough to read that the etiology of pneumonia is the pneumococcus. This is not true. Etiology deals with the study of causes, and pneumococci can be present in the body without causing disease. Manifold factors, together with the pneumococcus, may cause pneumococcal pneumonia. Examples of such loose talk and writing could be added almost ad infinitum.

Another indictment of the profession is reflected in the swallowing by thousands and thousands of people of countless numbers of little capsules containing killed bacteria to prevent the common cold, an example of utterly useless and wasteful therapeutics. It is a matter of simple immunological knowledge that such stuff is a complete waste, and yet these products are prescribed daily. What sort of things have we been taught that we should learn physiology and therapeutics from the attractively prepared brochures given the profession by the commercial drug houses?

I wish to digress a moment, but with a purpose. We Americans are quite certain that everything in this country is either the biggest or the best, or both. Almost every issue of *Life* magazine contains one or more pictures of scenes native to this country and described as the biggest or most beautiful or the busiest in the world. This is not only utter nonsense but a gross distortion of a sense of courtesy and the proper fitness of things. We do ourselves no good in our relations with others in constantly bragging of our superiority. This general attitude pervades American medicine. The *Journal of the American Medical Association* frequently cites the excellence of American medicine and its superiority over that of all other countries. That we are, in fact, superior is open to question. Of the great men of medicine certainly far more have come from England and Europe (admittedly, particularly in the past). Although this might be due to our younger culture, or for whatever reason, we should not be blinded by narrow provincialism, as we now are, and we should concede, if need be, that others are as good, or even better, than we. And if we are superior we should have the good grace not to talk about it. It is this generalized edema of the ego which contributes to a lot of nonsense now put out about our schools, and we must return to a more sane outlook and broader, impartial view if our schools are to be made better.

But what is being advocated by our leaders? The following is taken from a paper by the dean of one of our better known schools: "It is apparent that more emphasis than heretofore should be placed upon parasitology, the medical and health problems of the tropics, psychosomatic medicine . . . , chemotherapy, the special diseases of adult and old age, biophysics, genetics, industrial medicine, public health, legal medicine, the care and treatment of trauma, especially burns, injuries and shock, nutrition, the correction of physical defects, aviation physiology, and the broad range of environmental factors in health as well as disease . . ." This is an appalling list. There is no mention here of basic principles, of the theory of disease, of fundamentals. Another writer states, "Industrial med-

icine and public health are expanding fields. . . . Chemotherapy and control of shock are not limited to war." Here the author gives equal importance to something which is a mere fraction of the clinical scene with subjects which embrace an entire school or discipline. Yet another dean writes of the need for the reorganization and integration of the medical school curriculum, stating that four subjects must be included: (1) He discusses the need for increase in knowledge of tropical medicine; (2) "The need for and the advantages and disadvantages of general practice should be presented to medical students. . . ."; (3) "The opportunities in country practice should be discussed in medical schools. . . ."; (4) He discusses here the extension of socialized medicine, and, "We must provide training for salaried positions. . . ." Are these things really to be given a place in the curriculum as a course of study as the writer suggests? This is a gross distortion of the ideals of medical education.

Perhaps, the greatest indictment of all comes from a statement made at one of the meetings of the Association of American Medical Colleges. It was pointed out that so often there is little interest in the problems of pedagogy. Even at meetings the attendance from the host college is small. If we have no interest in these matters, our progress will be delayed. Ill conceived, short sighted policies must be dealt with by an active participation of all who call themselves teachers and a renewed interest taken in these serious matters.

What might be done to improve the training and morale of our doctors? I believe the following to be of importance:

1. Definition of basic principles. What I mean by this can be implied from these words by Charles Wilson³ (the quotation appears in Walshe's paper¹): "It is nowhere denied that we ask impossible tasks of students, who are bewildered by hours of listening, and that we stamp out the habit of reflection by a ceaseless drill. And this is done in the name of education. . . . So strange an anomaly may set us thinking how we are come to such a pass. The blunt truth would appear to be that the handling and revision of the curriculum are based on a misconception of what we can and ought to attempt in a medical school. The one purpose of the student's years is, it seems, not to train and test habits of thought, but to collect and store a set of facts, as squirrels hoard the nuts on which they hibernate. . . . It may be conceded that such a policy was reasonable when medicine was a slowly progressing science that did not greatly alter in a man's lifetime. Today it leaves him bankrupt when he has scarcely begun. The little he knows is soon antiquated, and he cannot keep up with a rapidly changing science, for we have so contrived to educate him that he cannot educate himself. . . . We trust neither his industry nor his capacity. He must be driven into different pens for every hour of the day, along with a drifting flock that presses now this way and now that. And this, if I may be allowed to change a metaphor, in the hope that he may one day recognize a disease because he has seen it before."

2. The cultural aspects of medicine. Sir Thomas Lewis has stated that the chief gap in medical education is academic culture. It is unnecessary to discuss

the point in detail. Those who have no conception of the meaning of the term have no business being teachers. There is one point in this regard that might be worth discussing. The modern tendency to drop proper names in designating disease states, and substituting supposedly more descriptive terms, as hyperthyroidism for Graves' disease, is another questionable matter. It is now the vogue to be "accurate," "objective," "impersonal." Few stop to consider that such a trend is accompanied by loss which may be even greater than the gain. If this keeps up, we will soon rear a generation of medical students who shall never have heard of Addison, Hodgkin, Bright and many another illustrious man. Furthermore, a proper name is much better under certain circumstances.

Let us compare von Recklinghausen's disease and osteitis fibrosa cystica. We object to von Recklinghausen's disease because it tells us nothing of the underlying trouble—it is not descriptive, and, furthermore, there is more than one disease by this name which leads to confusion. In favor of osteitis fibrosa cystica is the supposed fact that this is descriptive and gives an immediate panoramic view of the disturbance. But even this is not correct. There is no inflammation here and osteitis is a misnomer. But this is the least objectionable feature and let us pass it by. Let us assume that some new knowledge is acquired about this disease, say that we find exactly how this disease arises, the mechanism at work in causing the change, so that what is newly found overshadows previous conceptions. Someone may wish to provide an even more descriptive term and the name is changed. Older generations of physicians see this new term and do not recognize it. But the term von Recklinghausen's disease is the same forever—it is the same disease—only new facts have been added, and the cultural value of the proper name is preserved. In this way we do not forget this man who first described the disease and who is therefore entitled to a place in our history. Discerning students will immediately be aware of the fact that this is a man to learn more about and they will at once seek to find how this man came to discover such an entity. They are, then, unconsciously studying medical history and are absorbing some of the culture of medicine.

This use of proper names is not a reflection on clearer or so-called "modern" thinking. Physicists, with their exact language, find nothing to be ashamed of in recognizing their great men, and Volta and Galvani, e. g., continue to be memorialized.

In descriptive names, too, there is the implication that knowledge is now complete and that we have arrived at a fixed state. There is no such implication when using proper names, and we, therefore, avoid rigid adherence to fixed ideas. In osteitis fibrosa cystica the pattern is established and we have reached the end of the road. In von Recklinghausen's disease of bone the field is wide open.

3. Realignment of emphasis from research to teaching. As our schools are now constituted, there is constant competition for the eye of the medical public. This is reflected in the countless numbers of inferior publications which pass as research. Much of what is written is a continuous list of "facts," of percentages

of cases carried to the nonsensical extreme of two decimal points, of publishing an article in one journal and by changing paragraph one to paragraph two, publishing the same thing in another journal (most of the material being garnered by an intern or resident in the first place, for which he gets no credit), and we have almost forgotten that ideas are more important than facts. In our schools teaching, real teaching, by those who love this sort of work should be the theme. Research has become a fetish, but to argue that true research is nonsense would be absurd. Research is a necessary part of the activities of a medical school, not only to advance the front of medicine but to provide an atmosphere in which students may be stimulated to further effort, to afford them contact with great men, and to gain experience in the process of discovering. But research should be left to those who have the touch, the insight, the will to learn something new—and this can be done by the lonely practitioner in an isolated community as well as by those in beautifully appointed urban laboratories—and the publication of papers merely as a means of self advertisement or hopes of promotion should be decried. A man should publish when he has something to say and for no other reason.

In the final analysis, if we can inspire a desire in the student to continue to learn long after graduation, to achieve a sense of critical judgment, to learn in spirit, if not in fact, how (as Helmholtz once defined the purpose of education) to tell the difference between what is true from what is apparently true, then we shall have accomplished something.

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The Practice of Neurology in the United States of America*

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The sad plight of clinical neurology has in recent years been often remarked (Penfield¹) and much has been written about it without more than vague impressions as a basis. For this address I have tried to collect factual data about the training of neurologists and the actual practice of neurology in the United States of America. In pursuit of this aim, questionnaires were sent to the Deans of all medical schools in the country and to all the neurosurgeons, neurologists and neuropsychiatrists certified previously to the summer of 1945 when the study was made.

The questions submitted to the Deans were as follows:

1. Is anyone in the department of anatomy especially interested in the anatomy of the nervous system? If so, who? If not, who teaches anatomy of the nervous system?
2. Is anyone in the department of physiology especially interested in the physiology of the nervous system? If so, who? If not, who teaches physiology of the nervous system?
3. Is anyone in the department of pathology especially interested in the pathology of the nervous system? If so, who? If not, who teaches pathology of the nervous system?
4. Is there a separate department of (organic) diseases of the nervous system? If not, in what department are diseases of the nervous system covered?
5. What are the names of the men who give instruction in organic diseases of the nervous system?

To the neurosurgeons the following questions were submitted:

1. What percentage of your practice is concerned with nonsurgical neurology?
2. What percentage of your income is derived from nonsurgical neurology?

The neurologists and neuropsychiatrists were asked:

1. What percentage of your practice is concerned with strictly organic neurology, rather than functional disorders such as the psychoneuroses or psychosomatic disturbances?
2. What percentage of your income is derived from strictly organic neurology?

The generosity of response to these questionnaires was evidence enough of the general interest in the problems involved. There was some discussion of the exact meaning of the terms used but, in general, the meaning seemed sufficiently clear to evoke definite replies without discussion. It would, of course, make a considerable difference whether epilepsy were reckoned as an organic or

* From the Department of Neurology and Neurological Surgery of the University of Illinois at the Illinois Neuropsychiatric Institute. This paper was prepared as the chairman's address to the Section on Nervous and Mental Diseases of the American Medical Association in 1946 and read before that Section at its meeting in San Francisco, July 4, 1946.

functional (psychogenic) disorder, but those who mentioned the problem stated that they had placed it in the former category; it is probable that the others had done likewise. One might question also whether an injury to the head were a surgical lesion if not operated on, but, external injuries in general being reckoned in the realm of the surgeon, it is probable that all of the neurosurgeons so considered it in replying to the questionnaire. Since we are interested in trends rather than in exact figures, the replies are believed to be sufficiently accurate for our purposes.

In looking over the material collected, one was struck by the fact that only 48 persons are certified in neurology alone; 22 are certified in neurology and in neurological surgery; 2, in neurology, neurological surgery and psychiatry; 3, in neurology and internal medicine; 2, in neurological and general surgery; whereas the number certified in neurology and psychiatry is legion. A scrutiny of the list of those certified in neurology alone revealed that three did not answer the questionnaire (from other sources I believe, however, that they do mostly psychiatry in spite of not being certified in that field); 14 others by their own admission practice mostly psychiatry and derive most of their income from that source; 2 are in general practice; 7 do mostly surgery; 1 is primarily a pediatrician (I know also three pediatricians who do primarily neurology, although not certified in the field); 2 practice in large private clinics where there is a minute subdivision of labor; 6 are young assistants in university clinics; 3 are doing primarily research; 1 is a health officer; 3 derive the greater part of their income from salaries as professors; the remaining 6 are older men, trained abroad, and most of them stated that they did very little practice. It is doubtful that any one of the 48 derives even the major part of his income from the practice of clinical neurology. Four men stated that their major source of income is clinical neurology, but they are all also certified as psychiatrists.

If we turn now to the certified neurosurgeons, we find that 67 answered the questionnaire. The estimates of nonsurgical practice ranged from 0 to 90 per cent; the estimates of income from nonsurgical neurology ranged from 0 to 50 per cent. Those replies which stated that no nonsurgical neurology was done and no income was derived from such sources were discarded as obviously insincere since every neurosurgeon must of necessity see such patients in consultation and charges fees for his opinion. Also were discarded all replies from men working in large private and university clinics on salary. Averaging the remaining 45 estimates, the figure was obtained of 59.7 per cent of nonsurgical patients and 17.5 per cent of income from nonsurgical patients. These percentages are undoubtedly lower than would be the case were the younger men not away with the armed forces. Five men, in their fifth decade, practicing in cities varying in size from 200,000 to 600,000 inhabitants were stimulated to go through their records for the preceding year and submitted accurate figures as follows: for nonsurgical patients—73.0, 77.0, 77.5, 81.8, and 88.0 per cent; for income from nonsurgical patients—12.0, 21.0, 22.5, 30.5, and 38.5 per cent. In looking through the reports it was at once evident that the high estimates of nonsurgical neurology were submitted almost entirely by younger men.

The trend is unmistakable; the younger neurosurgeon who is out on his own is doing an ever increasing amount of nonsurgical neurology as has been previously predicted (Bucy²). With a constant stream of young neurosurgeons being turned out the trend is apt to continue, for obvious reasons. The figures for income are also eloquent and doubtless furnish the reason why seven neurologists who are not certified neurosurgeons nevertheless do mainly neurosurgery and derive most of their income from that source. With the large fees derived from operations, the neurosurgeon can set low fees for neurological work and make it impossible for a non-operating neurologist to compete with him; in estimating their income from nonsurgical neurology several men remarked that probably their fees for that work were too low. The neurologist is then obliged to undertake to operate or to acquire an increasing amount of psychiatric work in order to live. Another reason for the low income of the surgeons for nonsurgical neurology is that they usually see such cases only once in consultation and then refer them back to the local physician. This also aids the tendency to bypass the neurologist since, if the patient needs no operation, he has been charged a low fee and returned to the referring practitioner; surgeon, patient and practitioner are all content, at least for the time being.

Now let us look for a moment at the neuropsychiatrists. Again were eliminated all men working on salaries for clinics, either private or university, or on the staffs of state hospitals. There remained 169 replies. The average estimate for organic neurology was 25.8 per cent and for income from that source 22.7 per cent. Eight men in their fifth decade, practicing in cities ranging in population from 200,000 up, went through their records for the preceding year and submitted estimates as follows: for neurological patients—2.0, 17.2, 25.0, 30.0, 32.0, 36.0, 47.0 and 52.0 per cent; for income from that source—16.0, 18.0, 24.0, 26.5, 27.0, 35.0, 38.0 and 40.0 per cent. Again, in looking through the reports, the trend was quite evident; only 29 estimated that even one-half of their practice was organic neurology and, of course, 11 worked on salary for large private or university clinics and the others were all well over 50 years of age with two exceptions. The conclusion is inescapable—for the vast majority of neuropsychiatrists the title of neurologist has become largely a decorative one.

If we check the above results by a more accurate study of a limited field, with which I am personally familiar, we find within it 40 men certified as competent to practice neurology. Of those, 3 are certified only in neurology—one is doing neurosurgery, one is doing psychiatry and some general practice, and the third is doing, by his own estimate, 90 per cent psychiatry. Four men are certified also in neurosurgery—two are working on a full-time salary, one estimates that he does 50 per cent nonsurgical neurology and the other 25 per cent. The others are certified also in psychiatry and only one estimated that he did as much as 50 per cent organic neurology (he has practically retired from practice). Even those who think of themselves as neurologists, and teach neurology in medical schools, estimate that they do no more than from 5 to 25 per cent organic neurology (with the exception of two men on salary in a university clinic). There are, in addition, three neurosurgeons not in the army; one estimates that

he does not more than 5 per cent of nonsurgical neurology, one says he does none, and the third estimates 75 per cent of his patients are nonsurgical.

In 1933 Riley³ wrote that "Perhaps the greatest danger that threatens neurology today is the possibility of the passage of the care of the psychoneuroses into the hands of psychoanalytic psychologists and psychiatrists." It is no longer a danger; it is an accomplished fact. Viets⁴ was prophetic when he wrote, in 1937, that "The clinical neurologist, treading his way carefully in private practice, so as not to disturb his status as a 'nerve man' and thereby lose the largest part of his practice with the psychoneurotic and the borderline psychotic, must become in the future, nevertheless, either a psychiatrist with neurologic leanings or a clinical neurologist, closely bound to neurosurgery, neurophysiology and the fundamental sciences of neuroanatomy and neuropathology."

It is true, as Ramsay Hunt⁵ remarked, that "The field of neurology has always included the functional nervous disorders, the neuroses and psychoneuroses." Why has it lost them? In my opinion, because the neurologist was not really interested in them and handled them inefficiently. Numerous former pupils at Queens Square have told me how badly the neuroses were treated by the neurologists there. I spent many months at the Salpêtrière and I know that the neurologists there were not very interested in the neuroses. Lhermitte⁶ writes that "All who are familiar with the clinic of the Salpêtrière, in which Charcot entrusted treatment for the psychoneuroses to Professor Pierre Janet, know how much they learned by attending the small wards in which are hospitalized patients with conditions that now are designated as more or less patent schizoid, cyclothymic and hebephrenic states, and patients with hysteria." The point is that he did entrust their treatment to Janet, and Janet is not a neurologist. The fact of the matter is that training of the neurologist develops an attitude which is not conducive to effective handling of the psychoneuroses. Strecker⁷ put it well when he wrote: "Do the psychoneuroses fall within the province of the psychiatrist or of the organic neurologist? I believe they are unquestionably within the province of the psychiatrist. Functioning as a practitioner, the neurologist dare not depart far from the structural facts of the nervous system. Naturally, an attitude of mind is induced that cannot deal effectively with the structurally unchecked data of psychopathology and psychotherapy." Why, then, does the neurologist attempt to hold on to the psychoneurotics for whom he has little sympathy or understanding? Perhaps because they pay well and also from fundamental distrust of the exclusively psychogenic viewpoint of many modern psychotherapists.

What of Viets' "psychiatrist with neurologic leanings?" We know that, in the past, many men went into the field after longer or shorter periods in State Hospitals for the Insane. Strecker writes, "If it (the word neuropsychiatrist) means a physician who can alternately and at will either cloak himself in the austere garb of a structural neurologist, testing exactly the validity of the function of the nervous structure and diagnose accordingly, or as a psychiatrist exercise the concepts of psychopathology and the resultant psychotherapy, then it would seem to be a misnomer, the concept which it represents existing so rarely

in fact that the hyphen becomes the chief reason for the union of neurology and psychiatry." After some experience in examining for the Board of Psychiatry and Neurology I am sure he is right. Why, then, do psychiatrists want to be certified also in neurology? Surely not for financial reasons when the experience of their fellows leads them to look forward to little more than from 5 to 25 per cent of neurological patients and less than that addition to their income. Because of the help it gives them in their psychiatric problems? Meyer⁸ writes, "With all my love for the structural facts in neurology, I greatly deplore the paucity of help and training offered in the organization of functional data." Aring⁹ also believes "that the discipline of neurology has a minor place in the post-graduate training of the clinical psychiatrist." And Strecker, "Speaking therapeutically, does the psychiatrist obtain from neurology any concepts of treatment that are valuable in the handling of his patients? I think not."

In the handling of his patients, there is the rub! The great weakness of the neurologist has always been his lack of a distinctive therapeutics. As Veeder¹⁰ put it, "Neuropsychiatry—may I frankly state the general attitude of physicians toward it without raising the question of the validity of the point of view—has been regarded more as a diagnostic specialty." A recent editorial¹¹ in the *British Medical Journal* states that "The neurologist is a consultant rather than a specialist . . . he is not the purveyor of a particular line of treatment." This general attitude finds support in the damning statement of a leading neurologist,³ "It is difficult to recall any new or startling innovations in the treatment of neurologic ailments that have been developed by the neurologist himself."

This is doubtless the reason for "the principal losses which neurology has suffered during the past" enumerated by Riley as follows: "(1) epidemic cerebrospinal meningitis; (2) anterior poliomyelitis, and (3) cerebrospinal syphilis. The losses which seem imminent are: (1) dorsolateral sclerosis with pernicious anemia, (2) the convulsive states, and (3), perhaps, the psychoneuroses." We may now leave out the "perhaps."

Meanwhile the very inner citadel of neurology has been invaded by the surgeons by means of a therapeutics solidly based on the very intellectual discipline which is distinctive of neurology. Organic neurology itself is slipping out of the hands of the neurologist. Numerous letters from neuropsychiatrists lamented the dwindling of their neurological clientele with the advent of a neurosurgeon in their neighborhood. An economic reason for this trend we have already mentioned. Another has been noted by Veeder: "Should he (the pediatrician) refer the child to the neurologist for further study or to the trained neurologic surgeon? If he is sufficiently suspicious of what is taking place he feels, as a rule, that the earlier the case is in the hands of the surgeon the better, and sees no cause for delay and extra study by a middleman. He knows that, regardless of the opinion of the neurologist, the neurologic surgeon must follow his own conclusions as to localization and decide on the plan of operation. That is outside the province of either the pediatrician or the neurologist." A more definite statement of the independence of the modern neurosurgeon would be difficult to make.

For my part, from the standpoint of the patient, I cannot lament the passing of the psychoneuroses into the hands of the psychiatrist, nor would I lament the passing of the organic neurology from the hands of the neuropsychiatrist, whom a few months' experience in an outpatient department does not make a neurologist. But we may doubt that the neurosurgeon is the legitimate legatee. As Walshe¹² puts it, this "is simply to recognize that logically—if the neurosurgeon is to make his own diagnoses—there can be but a single adequate school for the neurologist, whether he proposes to practice neurosurgery or not. Physician or surgeon, he must go through the same mill: the neurologic clinic. . . . sound training in clinical neurology is the foundation of a neurologic education. This is as true for the neurologist who proposes to devote himself mainly to the surgical treatment of such nervous maladies as require it, as for the pure physician." Experience examining for the Board of Neurological Surgery has convinced me that numerous neurological surgeons are being certified who do not have this training. I am not alone of this opinion. Bucy, former Chairman of this Section, wrote³: "We have been so concerned with teaching the young men in this field to execute with reasonable facility the various surgical technics as we now know them that neurosurgeons have been little concerned with seeing that their proteges have any contact with the basic sciences of anatomy, physiology and pathology, with experimental methods or even with diagnostic neurology. Unbelievable as it may seem, such deficiencies in training are not accidental but often truly deliberate." Nevertheless, the organic neurology is passing into their hands, and the requirements for neurological training by the Neurosurgical Board have not been increased; there is even a faction among the neurosurgeons which would suppress the present inadequate requirements.

In 1933 Brouwer¹³ wrote: "The value of nerve specialists in the sphere of therapeutics depends chiefly on the fact that they have considerable psychotherapeutic experience and in the second place on their ability to give surgical advice when an operation has to be performed." We have already noted their inadequacy in the first field and Veeder their superfluity in the second. He added, "Only one conclusion can be drawn by the pediatrician, and that is that pediatrics does not expect much from, nor depend much on, neurology."

What is left then for the neurologist? Extinction? I think not. The diagnostic field is left. In this field even the neurological surgeon is inadequate not only because of lack of training but also because often his interest goes no further than to settle the question whether the condition is operable. In the smaller cities he is apt to continue to do the neurology "often being the only individual in their community at all familiar with the intricacies of the nervous system." But he is apt to remain an inadequate neurologist for other reasons than insufficient training and interest. The long hours which the neurosurgeon must spend at the operating table make it impossible for him to spend the equally long hours necessary for the proper examination of patients and for keeping abreast of the neurological literature. I have a very vivid memory of the struggles I have had over the last twenty years to find the time for study and I have been relatively protected in University clinics. Most neurosurgeons leave the examina-

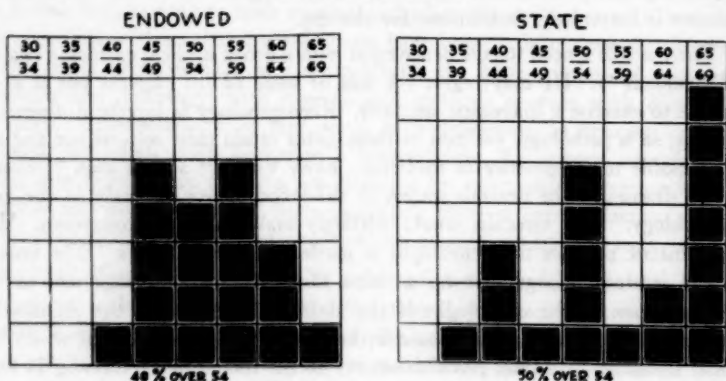
tions to half trained assistants, checking only those points they deem necessary to guide their therapy. Some associate with themselves more or less competent neurologists to make the examinations. One neurosurgeon has associated with him in his office one man called neurologist and another psychiatrist. The neurosurgeon, insofar as he becomes successful, must become an increasingly inadequate neurologist for lack of time.

The same reasoning applies to the psychiatrists. Modern treatment of the psychoneuroses is so time consuming that they can rarely hope to become adequate neurologists. Besides, the psychiatric mind must of necessity occupy itself with social, legal and administrative problems alien to neurology. The neuropsychiatrist has become a nonviable Siamese twin, as Strecker stated. Nor can neurology fall back into internal medicine. Even before medicine became too vast a field for any man to master, internists rarely had any grasp of neurology. The only section of his textbook which Osler did not write was the one on neurology. Neurology is a complicated body of knowledge alien to internal medicine and to modern psychiatry. It is necessary to the neurosurgeon but he has little time to cultivate it beyond the indications for therapy.

There is still a need for the neurologist with a broad medical outlook (Walshe and Symonds¹⁴). He may regret the loss of some of his patients but it is no disgrace to exercise a diagnostic specialty. Roentgenology is largely a diagnostic specialty, so is pathology, yet men in those fields retain their self-respect and are indispensable to the practice of medicine. Even Veeder¹⁵ admits that "Unusual or rare diseases of the nervous system in childhood belong properly in the field of neurology." The internist would willingly make the same concession. Also, in psychiatric practice the neurologist is needed. As Riley³ notes, "The impelling and irrefutable argument for at least the preliminary management of the psychoneuroses by the neurologist is the absolute necessity for the elimination of the possibility that organic disease is the basis for the symptoms of which the patient complains." Many psychiatrists try to fill this need by training in neurology. This is probably the impelling reason why so many psychiatrists seek complementary certification in neurology; rarely, however, is their training adequate to their purpose. The psychiatrist wants to be known as a neurologist also, perhaps, because many patients are still reluctant to go to a physician who is known to care for the mentally ill. Also, someone must care for the patients whom the neurosurgeon rejects as unsuitable for operative treatment. Does this justify the sneering remark of one of my colleagues that the neurologists' business is to take care of those patients who have nothing the matter with them or for which nothing can be done? The psychiatrist has taken over those referred to as having nothing the matter with them and the fact that he has no radical curative therapy to offer should not deter the neurologist from furnishing what alleviation he can for the suffering of the others. He has the great advantage that he is interested in their troubles; it was exactly that lack of interest which lost him the psychoneuroses. Not even the internist is interested or adequate to follow and judge the progress of many of these patients whom he nevertheless treats.

There is a need for the neurologist in the practice of medicine; there is an even greater need for him in the teaching of medicine. Neurology has become too complicated to be taught by internists, surgeons or psychiatrists. Yet, this is what is being done. There are two medical schools in which neurology is taught by internists, two by neurosurgeons and numerous others in which the only neurological teaching is done by psychiatrists inadequately trained in neurology. Riley³ noted, in 1933, that "In many centers for medical instruction neurology has never been able to establish its independent identity, and in other quarters neurology has suffered a definite decrement in importance." And Viets⁴ in 1937 wrote, "When one finds that only 16 of our 75 approved medical schools have separate departments of neurology and that only 20 more teach neurology under a combined department of neuropsychiatry, one wonders how much of modern neurology reaches the medical student in the other 39 schools." Certainly very little.

FIGURE 1—AGES OF CHIEFS OF NEUROLOGICAL SERVICES IN 40 UNIVERSITIES CHOSEN AT RANDOM.



What is the present prospect for neurology in our medical schools? Dr. Alan Gregg,¹⁸ in his study of recruitment in medicine, made some interesting charts showing the age-distribution of the chiefs of various services in 40 medical schools, 20 state and 20 privately endowed. Using the same lists of schools I have constructed similar charts for neurology. Since in most of the schools there is no separate department of neurology, I have taken always the person stated by the Dean to be primarily charged with the teaching of diseases of the nervous system. They show clearly, particularly for the state universities, the immediate crisis which impends. It seems unnecessary to extend such a detailed analysis to the other medical schools, but a rapid survey indicates that, if such a survey were made, the plight of neurology would be even worse than that indicated by a study of the 40 selected schools.

In one of the endowed schools there is at present an acting head whom it has proven impossible to classify, so the data for these schools include only 19 men. Of these, 13 are over 50 years of age and, of the 13 men, 6 are primarily neu-

rologists. Of the 6 men below 50 years of age only two are primarily neurologists. An analysis of the entire group shows 8 psychiatrists, 8 neurologists, one internist, one pediatrician, and one surgeon.

In only three instances is there a separate department of neurology, one department includes neurology and neurosurgery, in 9 instances neurology is a subdivision of the department of internal medicine and in 7 the department includes neurology and psychiatry.

Of the 19 men, 9 are not certified by any specialty board, 10 are certified neuropsychiatrists (one also in neurosurgery) and one is certified by the Board of Internal Medicine.

Of those primarily neurologists only two are under 50 and six are above. Of the only two departments of neuropsychiatry headed by neurologists one head is 63 years old and the other 59. In one school there are three young well-trained neurologists—one in the department of internal medicine, one in the department of pediatrics and one in the department of surgery.

Of the 19 schools, 10 have well trained younger men capable of being developed to head a department—of these one is in a department of pediatrics; 3 are in departments of neurology; one is in internal medicine and 5 are in neuropsychiatry. In only four schools is there any organized effort to develop neurologists although in about six others there are adequate facilities for doing so. In only one of the five departments of neuropsychiatry headed by psychiatrists is the head adequate to develop neurologists.

In the state schools, the outlook for neurology is much worse. Seven of the heads are over 65 years of age. Altogether 75 per cent are over 50 years of age, and of these six are primarily neurologists. In the departments of neuropsychiatry headed by neurologists all three are over 50 years old.

If we analyze the situation in the state schools further, we find that 5 have separate departments of neurology, 9 have departments of neuropsychiatry, in 5 neurology is a subdivision of internal medicine, and one department includes neurology and neurosurgery.

Of the heads below 50 years of age only one is a neurologist, two are psychiatrists, one an anatomist not in practice, and one is an internist. Of those over 50, six are neurologists, 8 are psychiatrists and one an internist. Eleven of the heads are certified neuropsychiatrists, one is certified by the Board of Internal Medicine, seven are not certified and one is certified in neurology, psychiatry and neurosurgery.

The dearth of neurologists in the younger group is alarming. Of the younger men in the same schools who seem capable of developing into satisfactory heads for a neurological training service, three are now doing primarily psychiatry, seven neurology, one neurosurgery and two are teaching anatomy. In seven schools no adequate younger men are in sight.

What are the reasons for this alarming situation? Primarily, doubtless, because of the increasing difficulty in earning a living in the practice of clinical neurology. Certainly there is no lack of interest in the nervous system (Bailey¹⁶).

In neuroanatomy, neurophysiology, neuropathology and neurosurgery there is intense and profitable activity. In 18 departments of anatomy are competent and fruitful investigators in the field of neurology; in 14 departments of physiology are similar enthusiastic leaders in the field, also in 11 departments of pathology are similar men although because of its complicated nature in 8 medical schools clinicians teach neuropathology. As a matter of fact, the neuropathologist must be also familiar with the detailed anatomy of the nervous system and have considerable familiarity with clinical neurology to answer the questions in which the neurologist is interested since these are often problems of pathological physiology. Many of the men in the academic departments could be interested in clinical problems with a little encouragement. The deans of medical faculties must take steps to keep clinical neurology from becoming a lost art. We are in a situation to meet the criticism of Brouwer¹³ when he wrote, "Many neurologists have acquired great experience in the clinical sphere, but whenever they meet with anatomic or physiologic problems they need the help of others. And many questions in the anatomy, histopathology and physiology of the nervous system which are of value for the clinician are worked out in laboratories without any direct contact with the clinic. One of the chief reasons why neurology so far has so few independent scientific centers is, in my opinion, that the aforementioned combination is seldom found." There are numerous young men at present who could be drawn out of the laboratories to apply their knowledge and experience to the clinic, to what profit is indicated by Walshe.¹² "We may say, then, that whatever success has attended clinical studies in the interpretation of the symptoms of nervous disease has been proportional to the degree in which these studies have been inspired by physiological principles, and to the extent to which—within the narrow limits possible in clinical medicine—the precise methods of experimental physiology have been applied." Neurophysiology in this country is making rapid advances which are just crying to be applied in the clinic.

Can any practical steps be taken now by the medical schools to strengthen clinical neurology? Yes; in a tentative way it is already being done. The clinical neurologist must be subsidized by the schools. The best solution, of course, would be the appointment of full time salaried neurologists. Where that is not possible, the neurologist could be paid a basic salary as neuroanatomist, neurophysiologist or neuropathologist and allowed to make diagnostic consultations. This solution has worked satisfactorily at Cincinnati and Oregon where Vonderahe and Dow hold positions in departments of anatomy. It is even more important that such a solution be arrived at for neuropathology which is now taught often by clinicians who are nevertheless not paid for such work. They could afford to do more fruitful work if they were paid salaries which would relieve them of the necessity of spending much time in psychiatric work for which they are often ill-suited. One good neurophysiologist I know has been forced into psychiatry, being unable to earn a living either in clinical neurology or physiology; such men are apt to make bad psychiatrists whereas they might have been assets to their schools in the field of neurology. The consultation work of these men is not liable to increase to the point of occupying all their time to the detriment of

their academic work. If younger men are shown an opportunity to advance in this field more bright young men will go into it.

Give them a chance and I believe they may even take back the psychoneuroses from the psychiatrists although that day has not yet dawned. As Mackay¹⁷ notes, "Actual daily contact with neurotic and psychotic people gives one the suspicion that their impressive 'psychologic mechanisms' may themselves be the products rather than the producers of illness. . . . At least one can construct just as impressive 'psychologic mechanisms' in cases of encephalitis, toxic delirium, brain tumors or neurosyphilis in which such mechanisms can scarcely have a causal relation to the illness." I should certainly agree on the basis of my own experience.¹⁸ Even in the writings of Janet and Freud it can be shown that they were clearly aware that the psychic mechanisms they so ingeniously elucidated were not in themselves adequate to account for the genesis of a single neurosis. The biochemists and even the mathematicians are invading this field. Shall the neurologist stand by and have it said again that another "new and startling innovation in the treatment of neurologic ailments" has been developed without him?

There are innumerable unsolved problems in clinical neurology awaiting the investigator who comes into the field through some basic discipline which he can apply to them. The whole field of demyelinating diseases, of virus infection (such as infantile paralysis), migraine, epilepsy, and many others await solution. Aside from the discovery of the etiology of disease numerous questions concerning the mechanism of symptoms are yet to be answered. The problems are waiting, the young men are available; it remains only to steer them into the field. For this purpose it is necessary to give them some hope, to show them that work along these lines will furnish a livelihood. There is still a good deal of work that demands special neurological knowledge and skill, for example, expert opinion in industrial compensation and insurance. With a little more aggressiveness the clinical neurologist can also take back many patients for treatment who are now left in the hands of the internist; many neurologists lose them because they do not want to bother with their treatment. There is no reason, other than indolence or indifference, why a neurologist cannot master and apply liver therapy in anemia, arsenic therapy in syphilis or sulfa therapy in other infections. But, for the time being, subsidies are needed. Here, the medical schools and foundations must help.

Steps must be taken also to enhance the prestige of the neurologist. His therapeutic sterility has been overemphasized; how much do the internists accomplish in many cardiac, renal and vascular diseases? As soon as one of these patients is unfortunate enough to develop a secondary lesion of the nervous system the internist usually tries to push him off into the hands of the neurologist.

It must not be forgotten that neurologists showed the way to the surgeons. The achievements of Frazier rested on ideas of Spiller; Bennett induced Godlee to remove the first brain tumor located by deduction from the symptoms alone; Gowers located the first spinal cord tumor for Horsley. In fact, nearly all modern neurosurgery rests on the patient labor of generations of neurologists.

Neurology has everything to gain by strengthening her ties with neurosurgery, since both rest on the same intellectual discipline (Bailey¹⁶), and by divorcing herself from psychiatry, at least for an indefinite future period, since psychiatry has moved into pathways alien to her genius. It would help also if the Board of Psychiatry and Neurology were split into two and the certificate in neurology based on more rigorous requirements. At first only two years' training was required for certification as a neurologist and one of them in psychiatry. This requirement has been lengthened but is still quite inadequate. It is not contemplated that the psychiatric training be abandoned. As the Committee on Neurology of the Royal College of Physicians rightly concluded, "many psychiatric patients will continue to seek the advice of neurologists and for this reason . . . all neurologists should receive an adequate basic training in psychiatry." But that a neurologist can be made in one or even two years, spent usually hanging around a dispensary, is absurd. Also, the neurological requirements for certification in neurosurgery must be considerably strengthened if neurosurgeons continue to attempt to function as neurologists. All these things and more must be done. The need for neurologists is not past, but they must be good ones, not merely hyphenated psychiatrists or surgeons. It may be true, as Symonds¹⁸ writes, "Looking to the future . . . the merging of the two specialties into one is not only desirable but inevitable." Yet, this is not apt to happen in the predictable future. Meanwhile clinical neurology has reached an all time low in this country; its renaissance is overdue.

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The Doctrine of Mutual Aid*

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Chicago, Illinois

MR. PRESIDENT, DEANS, THE FACULTIES, MEMBERS OF THE CLASS OF 1946, FRIENDS OF THE UNIVERSITY OF ILLINOIS, LADIES AND GENTLEMEN: On important occasions, such as this, a university looks at its work, its relation to the society it serves, its scholarship, its science and humane letters, but above all, its human products—the young men and women without whom there is no progress and no future. So today the University of Illinois performs the ancient ceremony which marks the achievement of certain high goals by the students of its Chicago Colleges of Dentistry, Medicine and Pharmacy.

It is well to remind ourselves in these turbulent, yet epic, times that universities are among our most durable institutions. For more than a thousand years, devoted teachers of each succeeding generation have carried on the unbroken tradition of humanistic learning and culture of western civilization. A. Lawrence Lowell once remarked that, when universities die, it is not from attacks from without but from within. The great state universities of this country are in no such danger and, though still quite youthful compared with universities of the old world, they have shown tremendous vitality and growth. A people's university, though detached in its social point of view, must forever be alert to anticipate the needs of the people and of society; its great strength lies in its integration with the society of which it is a vigorous expression. Nothing pertinent to the welfare of the people should escape its scrutiny. This concept of the place of a university in the social process has grown out of the context of American life and the trends of education in western civilization. It is not surprising that the health science professions have been adopted and liberally supported by state universities, for here is a field that intimately concerns the welfare of every man, woman and child of the commonwealth. In the short span of a little more than seventy-five years, and largely in the past twenty-five years, the State of Illinois has created one of the great universities of the world. It is in truth a giant in the land which is only now feeling its true strength and national stature.

Such rugged vitality is the more remarkable when it is recalled that, after the fall of the Roman Empire, centuries elapsed without any significant progress in scholarship and science. Fortunately, during this long, dark period, scholarly, patient monks nourished and kept alive the learning of the ancient Greeks as it reached them from the Romans. Now to our generation of Americans and Englishmen has come the responsibility of carrying forward the currents of

* Commencement Address, University of Illinois Chicago Colleges, delivered June 21, 1946.

Parts of this paper are paraphrased from a monograph on "Medical Education and the Changing Order," published by the Commonwealth Fund under the auspices of the New York Academy of Medicine, Committee on Medicine and the Changing Order, 1946.

western learning and civilization. Europe in her great agony is no longer the chief custodian of this great inheritance.

Only in the perspective of centuries is it possible to appreciate something of the monumental achievements of the Golden Age of ancient Greece. The ideas and teachings of that age, more than 2,000 years ago, altered the course of history and affects our lives to this day.

Among the distinguished thinkers and teachers of those epic times, the place of Hippocrates, the Father of Medicine, is secure. He dealt almost exclusively with the natural causes of disease and their natural cures. He substituted bedside observation of patients for mysticism. He separated medicine from any system of philosophy or theology, and gave it a firm, independent foundation in observation and rational thought. He did more. He saw that medicine must have a sound tradition of learning and ethics, and these he gave it by precept and example. There is no nobler statement of medical ethics with which to hand on the traditions and moral standards of the medical calling than the oath which bears his name. What this remarkable Greek accomplished in establishing medicine as a science and delivering it from obscurity in the mists of superstition is rarely appreciated today.

The thinking and ideas of the philosophers, Socrates and Plato, absorbed and applied by Aristotle, a naturalist and physician, played an important role in the development of the methods of logical reasoning which were the foundation of ethical conduct and justice of the Greeks. Plato expressed the central doctrine of Socrates in the words, "It is better to be than to seem. To live honestly and to deal justly is the essential."

Men have always been curious about themselves, particularly in disease. Before the era of Grecian learning, men were largely ignorant about themselves and explained the phenomena of life in imaginary and mystical terms. Illness and death were often confused with natural events not otherwise explainable. In his fear of the unknown, man sought help from someone, medicine man or priest, who promised healing and propitiation of the evil forces he could not understand or control. The medical and religious arts were often combined. Despite his deficiencies in learning and skill, the healer enjoyed the same social security accorded the professional man of today.

Man's search for relief from disabling illness has been motivated by the idealistic social purpose of race preservation. Man has instinctively realized always that the survival of the social group depended upon the survival of individuals healthy enough to reproduce their kind. In his long, upward struggle, man has singled out and clung to his faith in things, persons and forces which, though beyond his understanding, offer hope of healing. There is probably no more consistent social characteristic, in primitive as well as civilized societies, than this doctrine of mutual aid which has inspired the development of the medical sciences. The social necessity of preserving and nurturing men who cultivate

and transmit the healing arts is the real origin of the idealism of medicine and education in the health sciences.

Primitive medicine lacked any foundation in scientific method and in an established body of widely accepted fact and theory. The flowering of the Greek culture was the most significant era in the history of man, for it represented a definite though gradual break with the cultural and intellectual patterns of antiquity. The significant thing is that medicine contributed immeasurably to the creative influences which were then set free in every field of learning and affairs. Grecian thinking, art and philosophy provided a cultural matrix within which intelligence could rid itself of the shackles of superstition and mysticism and substitute the clear light of reason. Rational thought and accurate observation as a basis for reasoning—these were the great contributions of Greek learning.

Today it seems inconceivable that the human mind could lie fallow for a thousand years. Yet for ten centuries it failed to use the priceless gifts of Galen's experimental science and the scientific method of Hippocrates and Aristotle. All branches of learning and science were fettered until the genius of Vesalius and Harvey broke the chains of "authoritative" doctrine and again put medical science on the road of progress. Perhaps we shall never fully understand all the processes that bound the mind of man so tightly throughout the Dark Ages. One thing is clear, however; men move forward together in all branches of learning and creative effort. Progress is impossible in any field unless there is a favorable climate for curiosity, ideas and ideals. Once the dogmatic authority of the Dark Ages was broken, man was once again free to reflect upon and to teach his beliefs in relation to himself, his fellows, nature and his God. These have been the principal avocations of thoughtful men ever since. Out of the best of such reflections and teachings has grown the great tradition of humanism and education in western civilization, based on science and an appreciation of aesthetic and spiritual values.

Christianity, concerned with the weak, the ill and the poor and teaching the spiritual brotherhood of man, had its effect on the decline of the authoritarianism of Rome. It also helped create the power of religious and political orthodoxy in the Middle Ages. The Christian practice of collecting the sick and infirm in places where they could be ministered to was the beginning of the hospital as we know it. Here men could observe and compare a great variety of diseases and many cases of each kind. Such a setting became the source of much of the learning and skill of clinical medicine.

With the growth of learning, science and free expression during the Renaissance, the material and spiritual interests of men found their proper and harmonious relationships. Slowly but persistently, progress was made toward a better understanding of the behavior, needs and rights of men.

The great religious prophets and poets were the first students of the human personality, its needs and its rights. They were concerned about men's hopes

and fears, their happiness, and the dignity and inviolability of the human personality. Man needed physical and moral security before his spirit and imagination could be freed for the conquest of new intellectual worlds. The Egyptians, the Greeks and the Romans had intellectual freedom for a privileged class. Their cultures were based upon the suppression of the rights and needs of man for the benefit of the favored few. Later, religious and political orthodoxy submerged all human values. It was not until the fourteenth and fifteenth centuries that men again began to challenge authoritarian doctrine which denied the right of inquiry and the importance of human values. The behavior of men is still the concern of religious leaders and poets. But it is also the concern of science which has rediscovered the human personality through psychology, psychiatry, social medicine and the humanities.

John Galsworthy, the great humanist and man of letters, linked the body and the spirit in imperishable words of simple nobility. In the wisdom of the humanities, he expressed the essential theory of the psychosomatic medicine of today. He wrote for the Inter-Allied Conference for Rehabilitation of World War I Veterans at London in 1918:

"Restoration is at least as much a matter of spirit as of body . . . (and) will come only if the minds of all engaged in the sacred work are always fixed on this central truth: 'Body and spirit are inextricably conjoined; to heal the one without the other is impossible.' If a man's mind, courage and interest be enlisted in the cause of his own salvation, healing goes on apace, the sufferer is remade. If not, no mere surgical wonders, no careful nursing, will avail to make a man of him again. Therefore I would say: 'From the moment he enters the hospital, look after his mind and his will; give them food; nourish them in subtle ways; increase that nourishment as his strength increases. Give him interest in his future; light a star for him to fix his eyes on. So that, when he steps out of the hospital, you shall not have to begin to train one who for months, perhaps years, has been living, mindless and will-less, the life of a half-dead creature.' That this is a hard task none who knows hospital life can doubt. That it needs special qualities and special effort quite other than the average range of hospital devotion, is obvious. But it saves time in the end, and without it success is more than doubtful. The crucial period is the time spent in hospital; use that period to re-create not only body, but mind and will-power, and all shall come out right; neglect to use it thus and the heart of many a sufferer and of many a would-be healer will break from sheer discouragement. . . . A niche of usefulness and self-respect exists for every man however handicapped; that that niche must be found for him. To carry the process of restoration to a point short of this is to leave the cathedral without spire. . . . To restore him, and with him the future of our countries, that is the sacred work."

This is just as good today in our human rehabilitation work after World War II.

Thus science and art are joined with the spirit of man. The Apostle Paul proclaimed this revolutionary doctrine almost 2,000 years ago in his Letter to the Ephesians when he wrote (4:25): "We are members, one of another." This is the essence of the democratic spirit. Today we sometimes use other words for this doctrine; we call it "mutual aid" or socio-psychosomatic, holistic medicine.

This then is our inheritance of medical science in western culture and civilization, a culture which has produced, in a few centuries, more freedom for men, greater industrial resources and wealth, more opportunity for everyone than all other ages of man, philosophies of life and systems of government combined.

All of this leads up to the one great question which is of first importance to any thinking person today: the crisis between technology and the higher values in life and living. Has man sufficient wisdom, humility, and social consciousness to use his newly-found material powers for the constructive rather than the destructive, purposes of mankind? Free men have proved that democracy, and our republican system of self-government particularly, have the inherent strength to be victorious in a world at war; they have yet to prove that they can win a durable peace. Never before has the intellectual, spiritual, and moral life of man faced a test of such portent for good or evil.

Thinking and planning for democracy must be bold and dynamic, drawing not only upon the talents of individuals, but also upon the social discipline of the group. At times, unfortunately, our system falters. We have great difficulty in distributing evenly the goods and services, including medical services, that our expanding technology pours forth in ever greater abundance. Our social process lacks stability which, perhaps, is but a sign of growth and change. This should not be too alarming. But, when our system becomes so unstable that it upsets our relations with our neighbors and when we lack the self-discipline and social controls to resolve our differences rationally and peaceably, then just to this extent has democracy failed at one of its primary tasks.

But there is a larger question, one that should concern every American. It is: What has happened to our greatest national asset, the native American spirit; the self-less, Christian spirit that founded this great nation, that unified and preserved it from internal division, that industrialized a continent and that, twice, in this century, joined with and led peace-loving peoples of the earth in conquering tyranny and preserving our right to live as free men? To live for what? For the good life for all men everywhere? Or for the giddy life of getting and spending in which human values are overwhelmed and smothered by the petty value of material things? If the latter is our answer to a starved and worn-torn world of want, then I say we are a dying nation with no hope of realizing our true inheritance of greatness.

We are left, it seems to me, with only one choice; we must elect to bring the machine under social control; we must decide that economies should be made to serve the good life for everyone; we must recognize that it takes a man, not a machine to understand a man; we must realize that "we are members one of another." Man can no longer evade the fact that all men belong to one human family living in one world—we are this, or we are nothing.

Time is short and apparently getting rapidly shorter. We must join hands with enlightened men everywhere, in the church, in business, industry, and

labor, in the professions, and in statecraft to strive for the revival of our native American spirit and for greatness in the "brave new world" in which we live.

This is the challenge of our epic century.

And now may I congratulate this splendid class upon its graduation from this distinguished university. Our pride in you, I trust, will equal your pride in being alumni of the University of Illinois. This is an open door to the society of learned men and women everywhere in the world.

Thus today you have become world citizens, for learning knows no national boundaries or racial lines. This is your heritage from the ages. I know that you will cherish it always. It is the gift of your university, a gift you have richly earned.

Now, speaking as a physician, may I prescribe a capsule of distilled wisdom for each of you. It is to be taken at your discretion as required by any circumstances in which you may find yourself. It was first compounded by a great man of letters, Robert Walpole, who gave this advice to the young: "Always good sense, good manners, good humor, and good faith." And may I add faith in yourselves, your families, your fellowmen, your university, your country, and your God.

Finally, may I take this opportunity to express my gratitude to the University of Illinois and to this great city and state for your kindnesses to me and my family while I have worked among you. I shall always be in your debt for the extraordinary satisfactions and opportunities afforded me in the educational and public work of this great university. Without this experience, my schooling would be quite inadequate for the duties which lie ahead in the Pacific Northwest. We shall miss you and follow with pride the further progress which is surely ahead under the university's new leadership.

PRELIMINARY PROGRAM
FOR THE
FIFTY-SEVENTH ANNUAL MEETING
OF THE
ASSOCIATION of AMERICAN MEDICAL COLLEGES
TO BE HELD IN
EDGEWATER PARK, MISSISSIPPI
OCTOBER 28, 29 AND 30, 1946

(This is not the order in which these papers will be presented.)

Address of the President: The Preceptor Method of Teaching
JOHN WALKER MOORE, University of Louisville School of Medicine.

The Curriculum: Integration and Departmentalization
C. C. CARPENTER, Bowman Gray School of Medicine.

Problems of Integration in the Medical Curriculum
TRAWICK H. STUBBS, Emory University School of Medicine.

The Medical Educator of the Future
LESTER J. EVANS, Commonwealth Fund.

Requirements for Faculty Membership
W. A. PERLZWEIG, Duke University School of Medicine.

Education for the Professions
REVEREND ALPHONSE M. SCHWITALLA, St. Louis University School of Medicine.

Recent Advances in Medicine and Their Effect on Premedical Needs
D. BAILEY CALVIN, University of Texas School of Medicine.

Research by Medical Undergraduates
CHARLES A. DOAN, Ohio State University School of Medicine.

The Support of Medical Education
H. G. WEISKOTTEN, Syracuse University School of Medicine.

Financial Requirements for Acceptable Standards of Medical Education

A. C. FURSTENBERG, University of Michigan Medical School.

State Funds in Support of Medical Education

H. B. WELLS, Indiana University.

Support of Medical Education by Student Fees

VICTOR JOHNSON, Council on Medical Education and Hospitals, American Medical Association.

Private Clinics in Medical Schools

E. COWLES ANDRUS, Johns Hopkins University School of Medicine.

The Basis for Teaching Social and Environmental Factors in Medicine in the Undergraduate Medical Curriculum

THOMAS D. DUBLIN, Long Island College of Medicine.

Some Aspects of the Clinical Teaching of Social and Environmental Factors

WILLIAM W. BECKMAN, Harvard Medical School.

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Medical Education

The Educational Number of the *Journal of the American Medical Association*, August 17, presents the results of a detailed study of all the phases of medical education as reflected in reports received from medical schools. It is impossible to review these statistics in the space that can be allotted to the subject in these columns, but we do stress, with emphasis, that every one interested in medical education should read this report carefully. In it he will find the answer to many questions which he may be tempted to ask.

Experience with reports has shown definitely that there is much variation in data given. This often leads to confusion. But, after all, the only source of information is what is reported by, in this instance, the medical schools. One fact presented in this study stands out clearly, namely, that the supply of medical students from the armed forces will not be as great for the entering classes of the Fall sessions as was predicted by some persons. Furthermore, entering classes will be smaller, according to this report, than they have been in many years, probably 25 per cent smaller. And only 60 per cent of the entrants will be veterans! Does that number represent the number of veteran applicants or the number of acceptable applicants? Reports received in the office of the Association of American Medical Colleges indicate that the number of applicants, to some medical schools, at least, has been very large. One school reported that it had received 3,000 applications when it had to refuse further applications. Another school reported that it had received 1,600 applications. And yet another 1,000 applications. These three schools normally can accom-

modate not more than 350 entrants. Whether other medical schools have had the same experience is not known, since their reports are not available. Many letters have been received in the office of the Association asking for information as to which schools, if any, have not closed their registration of new students. Some of the writers mention the schools which have refused them admission. That would lead one to believe that the situation is widespread. Schools are not only decelerating, but they are restricting admissions to the normal which prevailed before the war.

If the figures quoted in the report mentioned above, and there is no reason to question them, only about 5,000 freshmen will matriculate this Fall. For many years the Association has made a careful study and kept a card index on failures of original entrants to medical school to graduate. Each year, from 20 to 25 per cent of original entrants have failed to graduate for one reason or another, mainly scholastic failure. If that holds good for the Fall entrants, only about 4,000 will graduate. Since nearly 3,500 physicians die each year, this small number of graduates will offer only about 500 new practitioners of medicine as against 1,500 in normal times.

The outlook for 1947 is even worse than that for 1946. National Selective Service goes into action again. That will affect not only the medical student who is in the age range of 19 to 29 years, but more especially the premedical students. Several surveys made by this Association of the ages of entering students have shown that the greater majority are 19 years of age and over. Thus the supply of medical students will virtually be shut off if no provision is made to give deferment to premedical students

who have been accepted by a medical school. Selective Service has said that no deferment will be given to premedical students. Bona fide medical students who are registered on Form 42 (Special-revised) may be deferred by their local draft boards. But, a directive to that effect has not been issued by Selective Service Headquarters. The statement made is to the effect that the medical student *may* be deferred by his local draft board. Word has already come from several medical schools that some of their students have been classified by local boards as Class A-I. The situation for 1947 is not, therefore, promising.

All this stresses the importance of reading very carefully the splendid report made by the Council on Medical Education and Hospitals in the August 17 issue of the *Journal of the American Medical Association* in order to get a clear picture of what all this means for the future of medical education and practice.

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Borden Award Committee

The Executive Council appointed the following committees on the Borden Award for the best piece of research done by a member of the faculty of a medical school in membership in the Association of American Medical Colleges: Dr. Edward A. Doisy, St. Louis University School of Medicine; Dr. John Youmans, Vanderbilt University School of Medicine; Dr. Charles Best, Faculty of Medicine, University of Toronto; Dr. James McNaught, University of Colorado School of Medicine, and Dr. Brian Blaze, George Washington University School of Medicine.

This award is to be made annually—if the committee finds a piece of research worthy of the award—for five years. It consists of a gold medal and \$1,000. The committee will meet soon and formulate rules of procedure. Dr. Doisy is the chairman of the committee. His address is 1402 South Grand Avenue, St. Louis 4, Missouri. He is professor of biochemistry in St. Louis University School of Medicine. The other

members of the committee represent physiology, medicine, pathology and surgery.

* *

The 1946 Annual Meeting

The 1946 meeting of the Association of American Medical Colleges will be held in Edgewater Park, Mississippi, October 28, 29 and 30. A cordial invitation to attend this meeting is extended to every one who is interested in medical education and the work of the Association. Elsewhere in this issue is published the preliminary program of the meeting. All the topics listed are of interest. The symposium on financing of a medical school is of more than passing interest. It is the first time that this vital subject is discussed frankly. It will give information to many whose thoughts on the subject have been far from correct. It will stress the need for adequate support of a medical school and higher education generally, especially professional education. In 1926, the Secretary of the Association read a paper dealing with the cost of operating medical schools. A comparison of the budgets presented in that paper with the budgets of the present shows a large increase in cost of operation, in many instances more than 100 per cent, the result of many and various causes, not the least being the increase in salaries. Revision of the curriculum will also receive attention as well as preparation for the study of medicine. The program gives every promise of a good reception.

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Turnover in Deanships

Since the 1945 annual meeting of the Association of American Medical Colleges there has been an unprecedented turnover in deanships, some the result of death, some due to resignation or retirement. There have been three deaths. Twenty deans have retired or resigned. Nineteen new deans have been appointed. Considering that there are only 78 medical schools in the United States and ten in Canada, this is rather startling. Three schools are without a dean and

are seeking a man to fill the vacancy. One dean will retire as soon as a successor is found. Thus, four deanships are now open. When these are filled there will have been 22 new deans since October, 1945, almost a 30 per cent turnover.

Ray Lyman Wilbur

At the San Francisco meeting of the American Medical Association, Dr. Ray Lyman Wilbur retired as member and chairman of the Council on Medical Education and Hospitals of the American Medical Association, a position he had held for many years. During his tenure he made many notable contributions to medical education. In 1923, he was president of the Association of American Medical Colleges. His successor on the Council is Dr. Victor Johnson. Dr. H. G. Weiskotten will serve as acting chairman of the Council until a permanent chairman is elected.

Committee on Aptitude Test

For some time, many medical colleges have voiced dissatisfaction with the aptitude test as an aid in the selection of prospective medical students. With the passing of time, fewer colleges made any use of the test. Many devised tests of their own. Hence, it seemed proper that the test should be discontinued. Therefore, the Executive Council, which was responsible for the test, voted in June that the committee be discontinued at the end of the current fiscal year of the

Association, August 31. No further tests will be given.

Committee on Evaluation of Psychometric Tests

At the Pittsburgh meeting in 1945, the Executive Council appointed a Committee on the Evaluation of Psychometric Tests for the purpose of devising a test which would be acceptable to medical colleges as a means of determining the acceptability of students applying for admission. Since Dr. Carlyle F. Jacobsen, then associate dean of Washington University School of Medicine, had given considerable time and thought to testing procedures, he was appointed chairman of the committee. Dr. Jacobsen, now dean of the Graduate School of the State University of Iowa, will report for his committee at the annual meeting of the Association in October.

Committee on Preparation for War

The Executive Council also appointed a Committee on Preparation for War whose duty it is to make plans for the operation of medical colleges as a war effort. If plans are in readiness if and when the country should again be plunged into a war, the part which the medical colleges will need to play will be definitely outlined and they can proceed without confusion. The chairman of this committee is Dr. Stockton Kimball, dean of the University of Buffalo School of Medicine. The committee will report at the October meeting.

College News

University of Texas Medical Branch

Dr. Jose R. do Valle, professor of pharmacology at the Instituto Butantan, Sao Paulo, Brazil, has been awarded a Guggenheim Traveling Fellowship for study in leading pharmacological laboratories in the United States. After several months in the laboratories of the University of Texas Medical Branch, Galveston, Doctor do Valle is visiting the laboratories of Dr. Herbert M. Evans and Dr. Hamilton H. Anderson of the University of California Medical Center, and will later work with Dr. E. M. K. Geiling of the University of Chicago. While at Galveston, Doctor do Valle worked with C. M. Pomerat, in the Tissue Culture Laboratory and with George K. Emerson and Paul Ewing, in the Pharmacology Laboratory.

Ardzronney Packchanian, Ph.D., director of the Laboratory of Microbiology, has been invited to give a series of special lectures in Brazil, during September, on Chagas' disease in North America and on the differential diagnosis between Weil's disease, yellow fever and jaundice. Doctor Packchanian has recently completed a preliminary survey of certain areas of Texas where human cases of Chagas' disease have been suspected. In this survey Doctor Packchanian was assisted by Dr. Piero Manginelli of the University of Sao Paulo, Brazil, a leading authority on Chagas' disease. This survey was supported in part by the Houston Foundation, through the generosity of the Honorable Jesse Jones.

W. A. Selle, professor of physiology, is surveying American medical centers under the auspices of the Baruch Committee for Physical Medicine in order to develop satisfactory methods for teaching the medical application of physics to undergraduate medical students.

Dr. Truman Blocker on terminal

leave as Colonel in the Medical Corps of the United States Army, and formerly in charge of Wakeman General Hospital, Indiana, is returning to the Medical Branch as professor of plastic and maxillofacial surgery.

Recent changes include the resignation of Dr. Stephen Weisz, associate professor of neuropsychiatry and assistant director of the State Psychopathic Hospital, to become associated with Southwestern Medical College, Dallas; the resignation of W. D. Collings, professor of physiology, to become a member of the physiology staff of the University of Iowa; the resignation of Thurlo Thomas as assistant professor of anatomy to become professor of zoology and chairman of the department at Carlton College, Minnesota; the resignation of E. H. Frieden as research associate in dermatology and syphilology to become associated with the Zoology Laboratory of Harvard University; and the resignation of Arthur Whiteley as research associate in the Tissue Culture Laboratory to accept a National Research Fellowship at the California Institute of Technology; and the resignation of Dr. E. J. Lefebvre as assistant professor of medicine and director of the Student Health Service to become director of the Galveston clinic of the Veterans Administration. Doctor Lefebvre has been lecturer in medicine and will assist in providing training for residents at the Veterans Administration Clinic.

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Washington University School of Medicine

Dr. Joseph Erlanger retired as emeritus professor of physiology at Washington University School of Medicine July 1, 1946. Dr. G. B. Forbes, instructor in pediatrics, is now at Los Alamos, N. M., where he is in charge of the pediatric service and research. Dr. Hallowell Davis has been appointed research

professor of otolaryngology, and associate professor of physiology. He is also director of research for the Central Institute for the Deaf in St. Louis.

The School of Medicine has established a Division for Postgraduate Medical Education, primarily designed for physicians returning to civilian life after having served in the Armed Forces. The new division is under the direction of Dr. Franklin E. Walton, assistant dean of the School of Medicine. The courses of study are conducted at various postgraduate levels. Long term, full time training of one to four years is offered at the residency level in the major clinical fields. Graduate courses in certain specialties are arranged for those with adequate basic training. Refresher courses in certain specialties are developed for qualified practitioners who have been separated from their specialties during the war years and to prepare recent qualified graduates for the specialty boards. Admission to the division will be granted to graduates of an approved medical school who have completed one year of internship or served its equivalent in the Medical Corps of the Armed Forces.

The United States Public Health Service awarded the School of Medicine a grant of \$270,000 for support of research on hypertension. The grant will cover five years, \$70,000 to be spent the first year, and \$50,000 to be spent each year thereafter. The research work will be under the direction of Dr. Harry Schroeder, who comes from the hospital of the Rockefeller Institute for Medical Research, where he worked with Dr. Donald Van Slyke.

The studies will be carried out in the research laboratories of the Washington University Department of Medicine, and a limited number of beds on the Metabolism Service of Barnes Hospital will be assigned to the project.

Dr. Palmer Fletcher, recently appointed assistant professor of medicine in charge of the Metabolism Division of the Department of Medicine, will take an active part in the hypertension

research. He will also be engaged in a study of electrolyte metabolism in cardiac failure, under a grant from the United States Navy.

A department of illustration will open approximately September 1, 1946, under the direction of K. Cramer Lewis, who was formerly with the photographic department at the State University of Iowa. The department will offer a complete medical photographic service, including clinical photography, photomicrography and motion pictures.

New faculty promotions and appointments were confirmed at Washington University School of Medicine, effective July 1, according to retiring Dean Philip A. Shaffer. Dr. Shaffer was recently appointed the Distinguished Service Professor of Biological Chemistry. Dr. Robert A. Moore, head of the Pathology Department, has been appointed as acting dean. Dr. Carl Cori, professor of biological chemistry, has been appointed head of the Department of Biological Chemistry.

Five faculty members have been promoted to professorships. They are Dr. Carl V. Moore, professor of medicine; Dr. Richard S. Weiss, professor of clinical dermatology; Dr. Henry G. Schwartz, professor of neurological surgery; Dr. Mildred Trotter, professor of anatomy, and Dr. James L. O'Leary, professor of neurology. Dr. Alfred D. Hershey was promoted to associate professor of bacteriology and immunology and Dr. Wendell G. Scott was promoted to associate professor of clinical radiology. Dr. Hallowell Davis has been appointed as research professor of otolaryngology and associate professor of physiology. Dr. Davis is also the director of research for the Central Institute for the Deaf.

Washington University will offer a course in Hospital Administration, beginning Sept. 16, 1946. The School of Medicine, the School of Business and Public Administration, and Barnes Hospital will supervise instruction, and other university schools and hospitals affiliated with the university will be utilized. The

course will provide detailed study of the entire field of hospital administration, with studies in the related fields of Public Health and Public Welfare Administration and a supervised administrative internship in the second year.

Prerequisite for applicants for the course is a baccalaureate degree either in arts or sciences from an educational institute approved by Washington University. The course will last approximately 21 months, of which nine months will be spent in academic instruction on the campus, and 12 months in an administrative internship approved by the faculty. The first year the student's program will be about half required courses and about half electives. In the intern year, the student, under supervision, has an opportunity to participate in actual management. Washington University will provide a certificate of Hospital Administration to those who complete the course, after the intern year. The new course is supported in part by a grant from the W. K. Kellogg Foundation.

It is announced that the heads of all preclinical departments have been selected. Anatomy, Dr. William F. Windle; biochemistry, Dr. Earl R. Norris; physiology, Dr. Theodore C. Ruch; microbiology, Charles A. Evans; pathology, Stuart W. Lippincott; pharmacology, Dr. James M. Dille. The admissions committee has almost completed its selections for the 1946 freshman class. Plans are being made for the construction of a college building and a teaching hospital.

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University of Utah School of Medicine

Dr. Richard H. Young, formerly associate professor of medicine, and recently director of the Student Health Service of Northwestern University School of Medicine, has been appointed dean. Dr. Young assumed his duties September 15th. Dr. H. L. Marshall, who has been acting dean, will now be enabled to devote full time to his posi-

tion as professor of public health and preventive medicine, and director of the Student Health Service.

The cooperative agreement between the Salt Lake Veterans Hospital and the School of Medicine is now in operation.

Dr. B. B. Crohn, associate in medicine, Columbia University, recently delivered two lectures before the medical students and local physicians. Dr. Crohn spoke on "Segmental Colitis" and "Regional Ileitis." Dr. L. P. Gebhardt delivered a lecture entitled "Organization of Policies for Combatting Epidemics and the Epidemiology of Poliomyelitis" before the Washington chapter of the National Foundation for Infantile Paralysis. Dr. M. M. Wintrobe, professor of medicine, recently addressed the Mexican Medical Congress at Mexico City on "Pathogenesis of the Anemias." Dr. C. E. McLennan, professor of obstetrics and gynecology, and Dr. J. A. Anderson, professor of pediatrics, spoke at the Montana State Medical Association meeting at Great Falls, Montana. Dr. H. H. Hecht has been promoted from instructor in medicine to assistant professor in medicine. Dr. Ira L. Telford, assistant professor of anatomy, George Washington University Medical School, was visiting lecturer in anatomy during the summer quarter. H. S. Nicholes, Ph.D., instructor in biochemistry, has resigned. W. E. Clapper, Ph.D., assistant professor in bacteriology, has resigned to accept a similar position at the University of Colorado School of Medicine.

The Miles Laboratories, Elkhart, Indiana, has made a grant-in-aid of \$7,075.00 for blood grouping studies and research on antibiotics in Utah plants, under the direction of G. A. Matson, associate professor, department of bacteriology.

The U. S. Public Health Service has made the following grants-in-aid for research in the departments indicated: \$26,210.00 for the study of pathogenesis of the anemia of infection, under the direction of Dr. M. M. Wintrobe of

the department of medicine; \$7,500.00 for an experimental study of surgical shock, under the direction of Dr. P. B. Price, department of surgery; \$24,500.00 for the study of the physiology and therapy of convulsive seizures, under the direction of Dr. L. S. Goodman of the department of pharmacology, and Drs. H. H. Davenport and J. E. P. Toman of the department of physiology.

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Long Island College of Medicine

A grant of \$5,100 has been received from the United Hospital Fund for an investigation of congenital malformation of the heart, one of the aspects of a program of research devoted to inflammatory diseases of the heart carried out by Dr. John M. Pearce, associate professor of pathology, and for research on pemphigus vulgaris conducted by Dr. Arthur W. Grace, professor of clinical dermatology and syphilology.

In conjunction with the Veterans' Administration, to meet the need for more trained psychiatrists, the college has established a graduate course in psychiatry of one, two or three years' duration. The program is being carried on in conjunction with the William Alanson White Clinic, the college's psychiatric center. The Veterans' Administration is financing the twenty physician veterans who have enrolled for the course. Nine additional psychiatrists have been appointed to the White Clinic to meet the needs of teaching in this program. Undergraduate students will also receive more teaching in psychiatry than heretofore. All classes are included in the program. More than 226 hours of instruction in psychiatry are scheduled.

Dr. Rudolph M. Cutino has been appointed clinical professor of ophthalmology; Dr. Charles A. Woerner, assistant professor of anatomy; Dr. Leo A. Harrington, assistant clinical professor of radiology. Promotions: Drs. Morris M. Banowitch, John B. D'Albora and Dr. George H. Lodi to clinical professors of medicine; Drs. Morris Glass and Frank P. Light to clinical professors of ob-

stetrics and gynecology; Dr. Mortimer A. Lasky, clinical professor of ophthalmology; Florence M. Stone, Ph.D., assistant professor of bacteriology; Dr. Saverio C. Franco, assistant professor of clinical medicine; Dr. Emil Smith, assistant clinical professor of pediatrics; Dr. Benjamin Rosenthal, assistant clinical professor of ophthalmology; Dr. Albert J. Ritzmann, assistant clinical professor of surgery.

The Life Insurance Medical Research Fund has given a grant of \$20,000 to cover two years of research by members of the college faculty who have contributed to the study of Bright's disease and the functions of the kidney. Dr. Jean R. Oliver, professor of pathology, will direct the study. Associated with him in this work will be Dr. William Dock, professor of medicine, and Dr. Robert L. Dicks, assistant director of the medical clinic at the college. The group also will study the effects of new drugs used in the treatment of infectious diseases.

Dr. William Dock, professor and head of the department of medicine, has been named chief of medical services on the College Division of the Kings County Hospital. The division numbers 750 beds, of which 180 are on the medical service.

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University of Colorado School of Medicine

Dr. Harry Haskin Gordon has been appointed full time professor and head of the department of pediatrics. He will take over on September 1st. He is at present assistant professor of pediatrics at Cornell University Medical College. Dr. Harold Dinken has been appointed head of the Division of physical medicine and assistant professor of medicine, on full-time basis, and will come on duty on September 1st. At the present time he holds a fellowship in physical medicine (a Baruch Fellowship) at New York University. Dr. H. Jackson Dodge has been appointed assistant professor of public health and laboratory diagnosis, and will begin his service

January 1, 1947. Dr. Franklin G. Ebaugh has returned from his service in the Army and has resumed his work as director of the Psychopathic Hospital.

More than \$20,000 in gifts and grants were presented recently. The contributions include an anonymous gift of \$10,000 to increase the facilities of the medical school for research in industrial hygiene and two research grants from the National Institute of Health. One of these, a grant of \$4,550, was awarded to Dr. Henry Swan, assistant professor of surgery, for an investigation entitled, "The Pathological Physiology and Surgical Therapy of Mitral Stenosis." Dr. Richard F. Thompson, professor and head of the department of bacteriology, received the other grant of \$5,000 for "A Study of Antibody Production in Corneal Connective Tissue." The medical school also received \$525 from the Life Insurance Medical Research Fund to help finance the tabulation of data obtained as a result of an investigation of rheumatic fever and rheumatic heart disease among children residing in Colorado areas over 9,000 feet. Two thousand dollars was contributed to the medical student loan fund of the school of medicine from the estate of the late Dr. John A. McCaw.

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Wayne University College of Medicine

Appointments: Dr. Lawrence Reynolds, professor and head of the department of radiology; Dr. Osborne A. Brines, professor and head of the department of pathology; Dr. Walter H. Seegers, professor and head of the department of physiology; Dr. Mason Guest, associate professor of physiology; Dr. Paul V. Wooley, Jr., professor of pediatrics; Dr. John M. Dorsey, professor and head of the department of psychiatry, succeeding Dr. H. A. Reye. Dr. Dorsey's appointment, which is full time, was made possible by a grant of \$90,000 from an anonymous donor. Dr. Herbert

I. Kellett, associate professor of proctology, is acting chairman of the department, succeeding Dr. Louis J. Hirschman, who retired. Dr. Fred C. Cole is acting chairman of the department of urology, succeeding Dr. William E. Keane, retired. Dr. Rudolf J. Noer, associate professor of surgery, is also professor of applied anatomy; Drs. Gabriel Lasker, Vernon Krahl and John Jacobs have been appointed instructors in anatomy. Dr. John Green of Cambridge University, England, has been appointed Alexander Blain Hospital Fellow in anatomy for the year 1946-1947. The Smith, Kline and French Laboratories have made an additional grant of \$2,500 to Dr. Amedeo S. Marrazzi, professor of pharmacology, for the continuation of studies by electrical methods of drugs acting on the autonomic and central nervous systems.

Dr. Hardy A. Kemp has been appointed Expert Consultant to the Secretary of War in the field of tropical diseases, according to an announcement received from Washington. Consultative relationships with the Army Medical School in instruction and research fields as well as advisory work with the Army Surgeon General were requested and will be provided in connection with the appointment. Dr. Kemp, who holds a colonel's rank in the Officers' Reserve Corps, served four years in the Army in the present war, two of these years being devoted to work in the tropics.

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University of Wisconsin Medical School

Dr. William S. Middleton, dean, was presented with an honorary fellowship in the Royal Society of Medicine. The presentation was made by Surgeon Rear Admiral Sir Gordon Gordon-Taylor.

John D. Ferry, Ph.D., assistant professor of chemistry, has been awarded the \$1,000 Eli Lilly and Company Prize for outstanding work in biochemistry. Dr. Ferry developed surgical products from blood plasma during the war period. Dr. Ferry was cited for "ver-

satile and incisive studies on the chemistry, especially the physical chemistry, of large molecules."

Promotions: Dr. Walter J. Meek, associate dean; Dr. Ralph E. Campbell, professor of obstetrics and gynecology; Dr. Raymond G. Harris, professor of physiology; Dr. Lester W. Paul, professor of radiology; Dr. Frederick J. Pohle and Dr. Edgar S. Gordon, associate professor of medicine; Dr. Helen A. Dickie, associate professor of clinical medicine; Dr. Frank L. Kozelka, associate professor of toxicology; Dr. Thelma Hruza, assistant professor of clinical neuropsychiatry (Student Health); Dr. James A. Miller, assistant professor of cancer research.

New Appointments: Dr. Sture M. A. Johnson, professor of dermatology; Dr. Carol M. Rice, associate professor of clinical medicine and assistant director of student health; Dr. Jacob W. Stutzman, assistant professor of physiology; Myrle A. Miles, assistant professor of anatomy; Dr. Llewellyn R. Cole, professor of clinical medicine and coordinator of graduate medical education.

Dr. Sture A. M. Johnson has been appointed professor of dermatology and syphilology. He is a graduate of the Medical School at the University of Oregon, and was a resident in dermatology at that institution. Following his service at the University of Oregon, he did postgraduate study in the field of dermatology and syphilology at the Skin and Cancer Unit of the New York Postgraduate Division of Columbia University. Here he worked under such men as MacKee, Sulzberger and Astrachan. Later he served as assistant professor of dermatology and syphilology at the University of Michigan Medical School, where he was associated with Drs. Wile and Curtiss.

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Medical College of Alabama

The University of Alabama has retired the debt on the Jefferson Hospital. It is now the property of the university. Guest speakers at a meeting of the Gor-

gas Medical Society were Dr. Reuben Kahn, professor of bacteriology and serology in the University of Michigan, and Dr. Paul B. Beeson, professor of medicine in Emory University School of Medicine. Dr. Alice McNeal has been appointed associate professor of surgery (anesthesia) and head of the department of anesthesia.

The Marjorie Dee and Gilbert E. Fisher Fellowship in otolaryngology and bronchoscopy has been established by Dr. Gilbert E. Fisher, professor and chief of the department of otorhinolaryngology, in honor of his wife, Marjorie Dee.

A Neuropsychiatric Institute has been created and will be located in the school's teaching hospital, the Jefferson and Hillman, which will house on one floor the newly formed department of neurosurgery, neurology and psychiatry and all patients of the institute. Diagnostic, therapeutic, research and teaching services of the institute will be available to the profession at large. This neuropsychiatric institute has been made possible by the Walter Haynes Foundation, which will subsidize study and research in addition to the activities of the institute. The Walter Haynes Foundation was created by Dr. Walter Haynes, professor and chief of the newly created department of neurosurgery, neurology and psychiatry and director of the Neuropsychiatric Institute. It aims to promote research, education and training in the fields of neurosurgery and neurology as well as to subsidize the institute.

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Medical College of Virginia

New Appointments: Dr. Randall L. Thompson, associate professor of bacteriology and parasitology; Dr. William A. Summers, assistant professor of bacteriology and parasitology; Dr. Charles E. Troland, assistant professor of neurologic surgery; Dr. Delbert V. Kechele, assistant professor of radiology; Dr. Tom W. Hodges, assistant professor of orthopedic surgery.

Promotions: Dr. Thomas N. Barnett, to associate professor of clinical med-

icine; Dr. Nathan Bloom, to associate professor of medicine; Erling S. Hegre, Ph.D., to associate professor of anatomy; Dr. Guy W. Horsley, to associate professor of surgery; Dr. William R. Jordan, to assistant professor of clinical medicine; Paul S. Larson, Ph.D., to associate professor of research pharmacology; Dr. James T. Tucker, to associate professor of orthopedic surgery; Dr. Harry Walker, to professor of clinical medicine; Dr. George Z. Williams, to professor of pathology; Dr. John P. Williams, to professor of clinical medicine; Dr. Washington C. Winn, to associate professor of obstetrics.

Dr. Wm. T. Sanger, president, has been elected president of the Virginia Cancer Foundation, succeeding Dr. Isaac A. Biggar. Dr. Frederick B. Mandeville, associate professor of clinical surgery in the University of Maryland School of Medicine, has been named professor of radiology. Dr. Jacques P. Gray, dean, has resigned to assume the deanship at the University of Oklahoma School of Medicine.

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University of Cincinnati College of Medicine

The board of directors of the University of Cincinnati has approved the establishment of a teaching center for physicians at the nutrition clinic that Dr. Tom D. Spies, associate professor of medicine, directs at Hillman Hospital, Birmingham, Ala. The Research Corporation of New York City has offered a grant of \$5,000 to further the effectiveness of the Birmingham Teaching Center, with the possibility of additional grants of \$5,000 for two succeeding years. Through the awarding of fellowships the program will teach physicians how to detect and treat the symptoms, especially early ones, arising from any form of malnutrition.

Dr. Albert B. Sabin, professor of research pediatrics, left Cincinnati on May 15, 1946, by air for Tokyo, where he will spend the remainder of the summer studying the problem of encephalitis in Japan.

For the year July 1, 1945, to July 1, 1946, gifts totaling \$91,572.00 were received. This does not include grants from OSRD or the N. I. H.; nor does it include gifts to the Nutrition Clinic in Birmingham, under the direction of Dr. Tom D. Spies. Including these activities the college has received gifts and grants in excess of \$200,000.00 during the year.

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Louisiana State University School of Medicine

Dr. Vernon W. Lippard, associate dean of the College of Physicians and Surgeons, Columbia University, and associate director of the New York Post-Graduate School of Medicine, has been appointed dean of the School of Medicine and professor of pediatrics. Dr. Lippard will assume his duties on September 15. Dr. Russell L. Holman, professor of pathology, School of Medicine, University of North Carolina, has been appointed professor of pathology and head of the department of pathology and bacteriology. Dr. Holman assumed his duties on July 20. Dr. Myron E. Wegman, assistant professor of clinical pediatrics, Cornell University School of Medicine, and director of training and research, Bureau of Child Hygiene, New York City Department of Health, has been appointed professor of pediatrics and head of the department. He will assume his duties on September 9.

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State University of Iowa College of Medicine

The clinical staff of the College of Medicine has set aside the last week of each month for clinical conferences of special interest to the practicing physicians under a plan similar to that which has been conducted by the department of urology for several years. Special operative clinics or ward walks and round table conferences will be held on each day of the week in which the last Wednesday of the month occurs. The Clinical Conference week will be held each month during the year except

in December, January and February when weather conditions are apt to be such as to make auto travel uncertain. The morning hours will be devoted, by members of the departments, to operative and amphitheatre clinics or ward walks according to the type of cases to be presented.

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*Indiana University
School of Medicine*

Dr. Willis D. Gatch resigned as dean. He has also resigned all other positions on the faculty, including his professorship of surgery, which he has held since 1912, when he first became affiliated with the school. He has been dean since 1931. Four departmental heads of the School of Medicine have been appointed by Herman B. Wells, LL.D., president, to administer the affairs of the school pending the naming of a successor to Dr. Gatch. The four who will constitute an administrative committee include Drs. James O. Ritchey, department of medicine; Matthew Winters, department of pediatrics; Frank Forry, department of pathology, and John D. Van Nuys, medical director. On the committee Dr. Van Nuys will serve as executive secretary.

Dr. George T. Garceau has been promoted to professor of orthopedic surgery. Other promotions include Harold R. Hulpieu, Ph.D., to professor of pharmacology, Dr. Cecil P. Clark to clinical professor of ophthalmology, Donald E. Bowman, Ph.D., to associate professor of biochemistry and William H. Headlee, Ph.D., to associate professor of parasitic diseases.

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Jefferson Medical College

Dr. Kenneth Goodner has been appointed professor of bacteriology and immunology, succeeding the late Dr. Randle C. Rosenberger. In 1929 he served as bacteriologist to the Harvard-Carnegie Yucatan Expedition. He joined the staff of the hospital of the Rockefeller Institute for Medical Research in

1930 with the rank of associate member. He resigned from the Institute in 1940 to become a member of the field staff of the International Health Division of the Rockefeller Foundation in which capacity he served until the present time. During the war years he was assigned by the Rockefeller Foundation to the matter of control of yellow fever. This work was carried out both in this country and in various parts of Africa.

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*University of California
Medical School*

Dr. William M. Hammon, associate professor of epidemiology, has been appointed dean of the University of California School of Public Health, Berkeley. Dr. Hammon succeeds Dr. Walter H. Brown, who recently retired.

A graduate course in internal medicine will open September 23, under the direction of Dr. Stacy R. Mettier, associate professor of medicine and head of postgraduate instruction for medical extension. A similar course in venereal disease will open September 13 under Dr. Mettier. Both courses will be presented by guest speakers and members of the faculty of the University of California. The internal medicine course will end December 9 and the one on venereal disease January 10.

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*New York University
College of Medicine*

Dr. George B. Wallace, professor and chairman of the department of pharmacology, will retire on August 31 after 44 years on the medical faculty of New York University. Since 1928 he has also been professor of pharmacology at New York University College of Dentistry.

Dr. John H. Mulholland has been named George David Stewart professor of surgery and chairman of the department to succeed Dr. Arthur M. Wright, who retired August 31.

Dr. William E. Studdiford has been appointed chairman of the department of obstetrics and gynecology. Dr. Clarence

E. de la Chappelle, assistant dean and director of the postgraduate division, has been appointed associate dean.

Dr. James E. McCormack has been appointed assistant dean. He will continue his work as an instructor in medicine. Dr. Robert Boggs, assistant professor of anatomy, has also been named assistant dean.

Dr. Arthur M. Wright, professor of surgery, retired August 31 after 39 years of teaching.

Dr. Severo Ochoa has been appointed professor of pharmacology and chairman of the department, to succeed Dr. George B. Wallace, who retired August 31. Dr. Ochoa joined the faculty in 1942 as research associate in medicine and later became assistant professor of biochemistry. The author or co-author of some fifty scientific publications, he is recognized as an authority in the field of enzyme chemistry and physiology. He has also made important contributions to medicine through his research in the biochemistry of muscles.

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University of Buffalo School of Medicine

Three symposiums will be held during the week of September 25-October 2 as a highlight of the university centennial observance. Body proteins will be covered September 25-27, cancer September 30-October 2 and heart disease September 30-October 2. Speakers from all over the country will participate.

Dr. Oliver P. Jones, Ph.D., professor and head of the department of anatomy, has been appointed assistant dean.

Appointments: Dr. Wallace B. Hamby, professor and head of the department of neurology and neurosurgery; Dr. Herman E. Bozer, clinical professor and head of the department of otolaryngology; Dr. Gilbert M. Beck, professor and head of department of psychiatry; Dr. Oscar J. Oberkircher, professor and head of urology; Dr. John H. Talbott,

professor of medicine; Dr. Walter L. Machemer, clinical professor of surgery.

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Stanford University School of Medicine

The eighth series of postgraduate medical courses for physicians is announced for September 2 to 6, inclusive, in cooperation with the San Francisco Department of Public Health and the San Francisco Hospital. The registration fee is \$50. There will be 11 courses: Internal medicine; pediatrics; surgery; obstetrics and gynecology; otorhinolaryngology; cardiovascular disease; hypertension and nephritis; surgical anatomy and operative technic; proctology; ophthalmology and anesthesiology. Arthritis and thoracic surgery will be covered in two evening meetings.

William Walter Greulich, Ph.D., professor of anatomy and director of the Brush Foundation, will spend the autumn quarter in Australia and New Zealand visiting the universities and medical schools of those countries.

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Loyola University School of Medicine

Dr. James J. Smith, formerly of the Northwestern University Medical School faculty, has been appointed dean to succeed Dr. Italo Volini who resigned some time ago. He has just been released by the Army after five years' service in the field of physiology. A graduate of St. Louis University Medical School, Dr. Smith took graduate work at Northwestern University, where he received an M.S. degree in pathology and a Ph.D. degree in physiology. Dr. Smith served for a year as an assistant in pathology at Cook County Hospital. He was an assistant instructor in the department of clinical pathology at the University of Illinois College of Medicine, and also did research and teaching at Northwestern Medical School before entering the Army in 1941.

*University of Illinois
College of Medicine*

Dr. Andrew C. Ivy, Nathan Smith Davis professor of physiology and pharmacology and head of the division in Northwestern University Medical College, has been appointed vice president in charge of the Chicago Professional Colleges of the University and distinguished professor of physiology in the graduate school. In his administrative work he will succeed Dr. Raymond B. Allen, retired. This is a newly created position in the university.

David Shakow, Ph.D., chief psychologist, Worcester State Hospital, Worcester, Mass., for eighteen years, has been appointed chief psychologist in the psychiatric division of the Illinois Neuropsychiatric Institute and professor of psychiatry at the College of Medicine.

Dr. Cornelius W. Vermeulen has been appointed associate professor of surgery.

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*Emory University
School of Medicine*

Dr. R. Hugh Wood, physician in chief at Emory University Hospital, has been appointed dean. He succeeds Dr. Eugene A. Stead, Jr., who resigned to accept a professorship at Duke University. Dr. Wood has been a member of the Emory faculty since 1924. Dr. Trawick H. Stubbs has been appointed assistant dean.

A grant of \$12,500 from the U. S. Public Health Service for fundamental research in the mechanics and effects of fever has been announced. The research, which began July 1, is being carried on by Dr. Paul B. Beeson, professor of medicine, and Dr. Albert Haymen, instructor in medicine and director of the Venereal Disease Clinic at Grady Hospital.

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Southwestern Medical College

Brig. General William Lee Hart, U. S. Army Medical Corps, retired, has

been appointed dean to succeed Dr. Tinsley Harrison, who wishes to devote all his time to research and teaching. Dr. Donald Slaughter, dean of students, has accepted the deanship of the University of South Dakota School of Medicine which is to be expanded into a four year school. Until Dr. Hart takes up his duties as dean, Dr. William F. Mengert, professor and head of the department of obstetrics and gynecology, will act as dean.

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*Boston University
School of Medicine*

Honoring Dr. Frederick H. Pratt, professor emeritus of physiology of the Boston University School of Medicine, a fund which has been set aside for use of the school library, has been designated as the Frederick H. Pratt fund.

The sum, started by sale of a collection of medical periodicals collected through the years by Dr. Pratt, was donated to the library for their disposal. As the library had duplicates of these magazines, they were sold and the money received kept for improvement and extension of the library.

Doctor George L. Maisson, Needham, associate professor of physiology, has been appointed professor and head of the department of pharmacology.

New Appointments: Dr. Chas. H. Burnett and Dr. Chas. P. Emerson, Jr., assistant professor of medicine.

Promotions: Dr. Kermit Katz and Dr. Henry J. Bakst, from instructor to assistant professor of medicine.

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*Northwestern University
Medical School*

Dr. Walter G. Maddock was appointed associate professor of surgery and Dr. Bertha A. Klien associate professor of ophthalmology. Dr. Wm. B. Wartman has been appointed Morrison Professor of Pathology and chairman of the department.

*University of Kansas
School of Medicine*

Dr. James B. Rodgers, professor of anatomy at the University of Louisville Medical School, gave a lecture before the combined Anatomy and Physiology Seminar. Dr. Rodgers spoke on the "Stimulation of the perivascular cells and endothelium of capillaries by microsurgical technique." Dr. William C. Young has accepted a position as associate professor of anatomy. Richard C. Webster has been appointed an instructor in the department of anatomy.

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*Columbia University
College of Physicians and Surgeons*

Dr. Allen O. Whipple, Valentine Mott professor of surgery at Columbia University and director, Surgical Service, Presbyterian Hospital, has accepted a position on the medical faculty of the American University of Beirut.

Dr. Whipple, who retires Sept 30, after 35 years on the Columbia Medical faculty and 34 years at the Presbyterian Hospital, will leave for Beirut, Lebanon, late in September.

Dr. Howard C. Taylor was appointed professor of obstetrics and gynecology and director of the Presbyterian Hospital obstetric and gynecologic service. He succeeds Dr. Benjamin P. Watson.

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*Creighton University
School of Medicine*

Reverend J. J. McNerney, who has been regent for fifteen years, has been removed to become chaplain of St. John's Hospital, St. Louis. His successor is the Reverend Father Crimmins, a former president of St. Louis University. Dr. John H. Murphy has been promoted to professor and head of the department of pediatrics, to succeed Dr. Floyd L. Clarke, who resigned as head but remains as professor.

*University of Nebraska
College of Medicine*

A student loan fund was established in honor of Miss Josephine Chamberlain, who for many years was superintendent of the dispensary. The fund has been established with the University of Nebraska Foundation. Loans will be available to both medical and nursing students of the college of medicine who are approved by the student loan committee.

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*University of South Dakota
School of Medicine*

Dr. Donald Slaughter, dean of students in Southwestern Medical College, Dallas, Texas, has been appointed dean, succeeding Dr. John C. Ohlmacher, who remains as professor of pathology. This school is being reorganized as a four year school of medicine.

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*Western Reserve University
School of Medicine*

Dr. Douglas D. Bond, professor of psychiatry, plans to introduce first year students to the emotional and mental problems of patients. This is in line with the trend to treat the patient as well as the disease. During the four years of study in the medical school increased emphasis will be placed on psychiatry.

Dr. William H. Weir retired as clinical professor of gynecology after 47 years as a member of the faculty.

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*Medical College of the
State of South Carolina*

Dr. Francis B. Johnson resigned as professor of clinical pathology. Dr. Johnson has been associated with the school since 1908, when he was named assistant in medicine, serving as professor of clinical pathology since 1918.

Woman's Medical College

Dr. Marion Fay succeeds Dr. Margaret D. Craighill, resigned, as dean. Dr. Louise Pearce was elected president of the college, Dr. Hubley R. Owen vice president; Dr. Catharine MacFarlane and Mrs. J. S. C. Harvey, a member of the Board of Corporators, were also elected vice presidents. Dr. Florence C. Seibert, of the Henry Phipps Institute, and Dr. J. Stewart Rodman, emeritus professor of surgery, were elected to membership on the Board of Corporators.

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*University of Oregon
School of Medicine*

Dr. Arthur W. Frisch, associate professor of bacteriology and clinical pathology at the Wayne University College of Medicine, has accepted a position as associate professor of bacteriology. Dr. Frisch came to Wayne in 1937, after earning four degrees, including those of doctor of medicine and doctor of philosophy, at the University of Wisconsin, where he had also served four years as a graduate research assistant.

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*University of North Carolina
School of Medicine*

Dr. James B. Bullit, professor of pathology for the past 33 years, was honored by a dinner to mark his retirement.

*University of Oklahoma
School of Medicine*

Dr. Jacques P. Gray, erstwhile dean of the Medical College of Virginia, has been appointed dean to succeed the late Dr. Tom Lowry.

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*Howard University
School of Medicine*

Dr. Joseph L. Johnson, associate dean, has been named dean, succeeding Dr. Lawlah, who resigned to enter private practice.

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*Johns Hopkins University
School of Medicine*

Dr. William W. Scott has been named professor and head of the department of urology and director of the Brady Urological Institute, succeeding Dr. Hugh H. Young.

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Hahnemann Medical College

Dr. Charles L. Brown, head of the department of medicine in Temple University Hospital, has been appointed dean. The college will hold formal opening exercises September 30.

General News

National Society for Medical Research

The National Society for Medical Research, a clearing house for information on medical studies and discoveries, has been organized under the sponsorship of the Association of American Medical Colleges with the cooperation of 101 national scientific organizations.

Dr. Anton J. Carlson, President of the Society and Professor Emeritus of Physiology at the University of Chicago, has announced the establishment of the society's headquarters office in Chicago, Illinois. Ralph A. Rohweder, 1946 President of the Chicago Junior Association of Commerce and former consultant and editor for the National Safety Council, has been appointed executive secretary.

The society has as its purpose the advancement of research in medicine, biology, pharmacy, dentistry and veterinary medicine. Dr. Carlson emphasized that an important function of the society is to analyze and expose the propaganda of small but highly vocal groups which object to the use of animals in the experiments without which medical science would still be in its infancy. Every year doctors and researchers must take time from their vital duties to defeat legislation proposed by these groups which would hamper or stop the work of the medical profession.

Secretary-treasurer of the society is Dr. A. C. Ivy, head of the department of physiology at Northwestern University. On the Board of Directors are R. B. Allen, University of Illinois; Alfred Blalock, Johns Hopkins University; C. S. Burwell, Harvard University; E. J. Carey, Marquette University; L. R. Chandler, Stanford University; W. C. Davison, Duke University; R. E. Dyer, National Institute of Health; H. S. Gasser, Rockefeller Institute; E. W. Goodpasture, Vanderbilt University; J. G. Hardenbergh, American Veterinary Medical Association; J. C. Hinsey, Cor-

nell University; Victor Johnson, American Medical Association; C. D. Leake, University of Texas; E. M. MacEwen, University of Iowa; W. S. McEllroy, University of Pittsburgh; B. O. Raulston, University of Southern California; A. M. Schwitalla, St. Louis University; Isaac Starr, University of Pennsylvania; E. L. Turner, University of Washington; Floyd S. Winslow, Medical Society, State of New York.

National offices of the society are at 25 East Washington Street, Chicago, Illinois.

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Medical Teaching Commission to Czechoslovakia

Dr. Milan A. Logan, professor of biochemistry in the University of Cincinnati, sailed June 20 for Czechoslovakia as a member of a medical teaching mission composed of a group of distinguished American medical educators, both clinical and preclinical. This commission, under the auspices of UNRRA and the American Unitarian Service Committee, will conduct a three-month intensive seminar in medicine, both clinical and preclinical, at a graduate level in order to acquaint the faculty of the Czechoslovakian Colleges of Medicine with advances in research and technic which have been made since the beginning of the war six years ago.

The Teaching Commission will be under the chairmanship of Dr. Paul D. White, Boston. Other members of the commission are: Dr. E. D. Plass, professor of gynecology and obstetrics, State University of Iowa College of Medicine; Dr. Alexander Brunschwig, professor of surgery, and Dr. Ralph W. Gerard, professor of physiology, University of Chicago Medical School; Dr. L. E. Holt, Jr., professor of pediatrics, New York University College of Medicine; Dr. Otto Kraye, associate professor of comparative pharmacology, Harvard

School of Medicine; Dr. J. E. M. Thomson, president of the American Academy of Orthopedic Surgeons, Lincoln, Nebraska; Dr. Joseph Volker, professor of clinical dentistry of Tufts College Dental School; Dr. Leo M. Davidoff, head of department of surgery, Jewish Hospital, Brooklyn.

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Weissman Medical Research Foundation

The Dr. Leonard H. and Louis Weissman Medical Research Foundation was recently organized to perpetuate the memory of Dr. Leonard H. Weissman, formerly assistant administration officer of the Cook County Hospital, and his brother Louis Weissman, both of whom were killed in airplane accidents over Germany during World War II. The funds that are collected by the group organizing and carrying on this corporation, which is organized as a nonprofit corporation under the laws of the state of Illinois, are to be used for medical research. The foundation is closely connected and allied with the Hektoen Institute. On June 26 the foundation donated \$5,000 to the Hektoen Institute to be used for medical research on rheumatic heart fever.

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Research Positions Created in Pennsylvania

Mr. S. M. R. O'Hara, Secretary of Welfare, of the Commonwealth of Pennsylvania, announces the establishment of twelve positions for research in psychiatry and related fields at the Western State Psychiatric Institute and Clinic, Pittsburgh. At the institute numerous clinical and teaching activities, the latter in collaboration with the University of Pittsburgh, have already been initiated. The institute is the teaching and research hospital of the Pennsylvania mental hospital system which includes twenty-one hospitals and institutions with an average of 40,000 patients. Thus access to much clinical material is assured. Here, it is expected will be trained psychiatrists, social workers, psychologists, nurses, oc-

cupational therapists and others for hospitals and private fields.

These new positions provide for the appointment of properly qualified senior and junior research workers in psychiatry, internal medicine, biochemistry, neuropathology, neurophysiology and clinical psychology. Several positions as in psychology and neurophysiology are currently filled. In some instances research at the institute will be coordinated with teaching at the university; in such cases the applicant for appointment, and his qualifications, must meet also with the approval of the Dean of the School of Medicine. Interested persons may obtain further information by writing to the Director of the Institute, Grosvenor B. Pearson, M.D., O'Hara and DeSoto Streets, Pittsburgh 13, Pennsylvania.

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Audiovisual Education

The American Society for Pharmacology and Experimental Therapeutics has recently appointed a committee to further the use of audiovisual aids in pharmacology teaching. A ten page list of moving picture film and film strips has been distributed, as a preliminary step, to all teaching departments and is available on request. A more complete list with critical abstracts is being prepared and members have been urged to give thought to preparation of films which will make their special experimental work easily demonstrated to others. The committee is made up of Dr. R. P. Walton (South Carolina), chairman, Dr. C. J. Carr (Maryland), and Dr. J. A. Wells (Northwestern).

♦ ♦

University of Puerto Rico

The sum of \$135,000 has been granted by the legislature of Puerto Rico to the University of Puerto Rico for scholarships in medicine during the fiscal year of 1946-1947 for students who meet the qualifications prescribed by the university. This is one of the measures adopted by the administration in Puerto Rico because of the shortage of physicians.

Book News

A Textbook of Biochemistry

By Philip H. Mitchell, Ph.D., Robert P. Brown Professor of Biology, Brown University. McGraw-Hill Book Company, New York. 1946. Price, \$5.

Emphasis is placed on the constitution and activity of enzymes, the intermediary reactions of anabolism and catabolism and the vital significance of hormones and vitamins and on nutrition.

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Manson's Tropical Diseases: A Manual of the Diseases of Warm Climates

Edited by Philip H. Manson-Bahr, M.D. Ed. 12. The Williams & Wilkins Company, Baltimore. 1946. Price, \$12.

This masterpiece is so well known in the profession that it is needless to give further praise. It has been brought up to date, necessitating much rewriting and addition of new material.

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Topley and Wilson's Principles of Bacteriology and Immunity

Revised by G. S. Wilson, M.D., Professor of Bacteriology, University of London, and A. A. Miles, F.R.C.P., Professor of Bacteriology, University of London. In two volumes. Ed. 3. The Williams & Wilkins Company, Baltimore. 1946.

Encyclopedic; the last word in textbooks of bacteriology.

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Pharmacology

By J. H. Gaddum, M.R.C.S., Professor of Pharmacology, University of Edinburgh. Ed. 2. Oxford University Press, New York. 1946. Price, \$6.

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Water Treatment and Purification

By William J. Ryan, M. E. Ed. 2. McGraw-Hill Book Company, New York. 1946. Price, \$2.75.

Describes and illustrates the design and operation of sedimentation tanks, coagulation basins, chemical feeding devices, filtration plants, softening apparatus, ion exchange apparatus, sterilization processes, etc., and also the chemical reactions that take place in the different water treatments. Every doctor should know something about this if he is to give service to his community if a small one.

Women in Industry: Their Health and Efficiency

By Anna M. Baetjer, Sc.D., Assistant Professor of Physiological Hygiene, School of Hygiene and Public Health, The Johns Hopkins University. Issued under the auspices of the Division of Medical Sciences and the Division of Engineering and Industrial Research of the National Research Council. W. B. Saunders Company, Philadelphia. 1946. Price, \$4.

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The Improvement of Teacher Education

A final report by the Commission on Teacher Education. American Council on Education, Washington, D. C. 1946. Price, \$2.

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Diseases of the Retina

By Herman Elwyn, M.D., Senior Assistant Surgeon, New York Eye and Ear Infirmary. The Blakiston Company, Philadelphia. 1946. Price, \$10.

A complete work on diseases of the retina, profusely illustrated; well written; well arranged, with emphasis on the fact that the retina participates in many systemic disorders.

* *

Medical Education and the Changing Order

By Raymond B. Allen, M.D., Executive Dean, Colleges of Dentistry, Medicine and Pharmacy, University of Illinois. The Commonwealth Fund, New York. 1946. Price, \$1.50.

* *

Progress in Neurology and Psychiatry: An Annual Review

By E. A. Spiegel, M.D., Professor and Head of the Department of Experimental Neurology, Temple University School of Medicine. Grune & Stratton, New York. 1946. Price, \$3.

The list of contributors to this book is a long one but it ensures completeness and authenticity. The specialist in this field of medicine will find it of value. The number of bibliographic references is staggering.

* *

Textbook of Biochemistry

By Benjamin Harrow, Ph.D., Professor of Chemistry, College of the City of New York. Ed. 4. W. B. Saunders Company, New York. 1946. Price, \$4.25.

A good text for the medical student.

Renal Diseases

By E. T. Bell, M.D., Professor of Pathology, University of Minnesota. Lea & Febiger, Philadelphia. 1946. Price, \$7.

Based on twenty-five years of study of structural changes in kidneys; the pathological physiology and the clinical manifestations of each disease. The rationale of treatment is presented but details are omitted purposely. Structural changes are correlated with clinical manifestations.

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Workbook in Psychiatric Nursing for Student Nurses

Edited by Lenore Kimball, R.N., for the faculty of the Psychiatric Nursing Department of the Cook County School of Nursing. The C. V. Mosby Company, St. Louis. 1946. Price, \$2.50.

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Environmental Warmth and Its Measurement:

A Book of Reference Prepared for the Royal Naval Research Committee of the Medical Research Council

By T. Bedford, Ph.D. Published by H. M. S. O., London. 1946. Price, 25c. With Supplement of Charts for the Calculation of Environmental Warmth. Price, 45c. Obtainable from the British Information Service, 30 Rockefeller Plaza, New York 20, N. Y.

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Peripheral Vascular Diseases

By Edgar V. Allen, M.D., Nelson W. Barker, M.D., and Edgar A. Hines, M.D., all Associate Professors of Medicine, Mayo Foundation, Graduate School University of Minnesota; with associates in the Mayo Clinic and Mayo Foundation. W. B. Saunders Company, Philadelphia. 1946. Price, \$10.

This book is dedicated to the late Dr. George Elgie Brown, a member of the Mayo staff, whose chief interest was peripheral vascular diseases. He planned the book prior to his death in 1935. It is based largely on the experience of the authors and their colleagues at the Mayo clinic, hence is a record of many years of observation of these comparatively little known diseases.

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The American Hospital

By E. H. L. Corwin, Ph.D., Executive Secretary, Committee on Public Health Relations, the New York Academy of Medicine. The Commonwealth Fund, New York. 1946.

This monograph presents a wealth of authoritative data on almost every phase of a broad subject. It is a highly informative and thought provoking discussion of the techniques of hospital administration, as well as a review of the development of the hospital.

General Biology

By William C. Beaverm, Ph.D., Professor of Biology, Wittenberg College. Ed. 3. The C. V. Mosby Company, St. Louis. 1946. Price, \$4.75.

This should be an excellent text for the student who intends to enter medical school. Human biology is stressed as well as many other phases of biology in which the medical student must have an interest. It is fundamental biology which too often is neglected for other nonelementary phases of biology. The author must be complimented on his work.

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Medical Biochemistry

By Mark R. Everett, Ph.D., Professor of Biochemistry, University of Oklahoma School of Medicine. Ed. 2. Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, New York. 1946. Price, \$7.

This book, originally one of the Student Textbook Series, has been revised and enlarged until now it is a sizeable text of nearly 800 pages. Correlation of the subject with clinical medicine is still a feature. Organization and presentation are based on more than twenty years of active consultation with clinicians and study of teaching problems in medical school. Many new subjects have been added to the original text.

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Disorders of the Blood: Diagnosis, Pathology; Treatment and Technique

By Sir Lionel E. H. Whitby, Regius Professor of Physic in the University of Cambridge, and C. J. C. Britton, M.D., Assistant Pathologist, The Bland Sutton Institute of Pathology, the Middlesex Hospital. Ed. 5. The Blakiston Company, Philadelphia. 1946. Price, \$10.

A complete discussion of diseases of the blood arranged in a clinical grouping; completely revised with the addition of much new material. The summaries at the end of the chapters are especially useful as a review of the essential features and as a concise survey of new developments.

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Allergy

By Erich Urbach, M.D., Chief of Allergy Department, Jewish Hospital, Philadelphia, and Philip M. Gottlieb, M.D., Associate in Allergy Department, Jewish Hospital, Philadelphia. Ed. 2. Grune & Stratton, New York. 1946. Price, \$12.

Nine hundred pages, with 3,326 references to the literature devoted entirely to the subject of allergy in an ambitious undertaking for which the authors deserve great credit. The work is well organized and numerous illustrations clarify the text admirably. The book should have great value for every practitioner as well as the specialist.

The Principles of Neurological Surgery

By Loyal Davis, M.D., Professor of Surgery, Northwestern University Medical School. Ed. 3. Lea & Febiger, Philadelphia. 1946. Price, \$7.50.

This new edition should be a timely aid in the diagnosis of all neurological conditions. It covers fully craniocerebral injuries, intracranial tumors and abscesses, the surgical lesions of the cranial nerves, injuries of the spinal cord and peripheral nerves, tumors of the skull and spinal cord and the surgery of the autonomic nervous system. Such topics as pain and the surgical treatment of epileptiform seizures, paralysis agitans and the psychoses are also covered. The work is a safe guide in the diagnosis and treatment of the more common neuro-surgical problems.

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Illustrations of Regional Anatomy

By E. B. Jamieson, M.D., Senior Demonstrator and Lecturer Emeritus in Anatomy, University of Edinburgh. Ed. 6. E. & S. Livingston, Edinburgh. 1946.

This is a series of seven volumes of handy and convenient size, printed in color and consisting entirely of drawings. Each region is illustrated fairly completely and every naked eye structure is shown in one draw-

ing at least. All illustrations are made from actual specimens or drawings or diagrams. The seven volumes cover the following parts: I—Central Nervous System; II—Head and Neck; III—Abdomen; IV—Pelvis; V—Thorax; VI—Upper Limb; VII—Lower Limb. Medical students will find it profitable to have this series at hand throughout their entire course of study.

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Stedman's Practical Medical Dictionary

Edited by Norman Burke Taylor, M.D., University of Toronto. Ed. 16. The Williams & Wilkins Company, Baltimore. 1946. Price, with Thumb Index, \$7.50; without Thumb Index, \$7.00.

Thoroughly revised and, hence, much enlarged. The small size of type used may not appeal to some who consult a dictionary frequently, but the book has some special features which will recommend it, such as: a section on medical entomology; printing of the Greek roots of words in Roman letters; brief description of the technic of clinical laboratory tests; inclusion of official pharmaceutical preparations; appendix covering weights and measures, tables of chemical elements, pathogenic microparasites, temperature and barometer scales.

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